



# GEF-6 PROGRAM FRAMEWORK DOCUMENT (PFD)

TYPE OF TRUST FUND: GEF TRUST FUND

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## PART I: PROGRAM IDENTIFICATION

Program Title:	Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security		
Country(ies):	Albania, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco and Tunisia.	GEF Program ID: <sup>1</sup>	9607
Lead GEF Agency:	UNEP	GEF Agency Program ID:	01445
Other GEF Agenc(ies):	EBRD	Submission Date:	July 25, 2016
Other Executing Partner(s):	UNEP/MAP, EIB, UNESCO IHP, GWP Med, WWF MedPO, UNIDO and IUCN.	Program Duration(Months)	72
GEF Focal Area (s):	International Waters, Chemical and Waste, and Biodiversity	Program Agency Fee (\$):	3,813,853
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		
Program Commitment Deadline: 2019-03-31			

### A. FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>:

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Expected Outcomes	Trust Fund	Amount (in \$)	
			GEF Program Financing	Co-financing
BD-1, Program 1	1.2 Improved management effectiveness of protected areas.	GEFTF	1,376,147	5,000,000
IW-2 Program 3	3.1 Improved governance of shared water bodies, including conjunctive management of surface and groundwater through regional institutions and frameworks for cooperation lead to increased environmental and socio-economic benefits.	GEFTF	7,000,000	31,000,000
IW-2 Program 4	4.1 Increased water/food/energy/ecosystem security and sharing of benefits on basin/sub-basin scale underpinned by adequate regional legal/institutional frameworks for cooperation.	GEFTF	4,000,000	18,500,000
IW-3 Program 5	5.1 Elimination or substantial decrease in frequency and extent of “dead zones” in sizeable part of developing countries’ LMEs.	GEFTF	10,500,000	581,000,000
IW-3 Program 6	6.1 Coasts in globally most significant areas protected from further loss and degradation of coastal habitats while protecting and enhancing livelihoods.	GEFTF	4,000,000	11,000,000
CW-2 Program 3	3.1 Quantifiable and verifiable tons of POPs eliminated or reduced.	GEFTF	10,250,000	41,000,000
CW-2 Program 4	4.1 Mercury is reduced.	GEFTF	5,250,000	20,500,000
<b>Total Program Costs</b>			<b>42,376,147</b>	<b>708,000,000</b>

<sup>1</sup> Program ID number will be assigned by GEFSEC.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCE](#).

## B. INDICATIVE PROGRAM RESULTS FRAMEWORK

Having completed the stage of assessments, diagnostics, priority setting, planning and experimentation, the countries of the Mediterranean have agreed that a higher level of effort is now required at the national and regional levels. This renewed and expanded effort is not only justified by the continuing degradation of the Mediterranean coastal zone and shallow marine environments, but also urgent in view of the growing impacts of climate variability, and of the loss of livelihoods and dramatic deterioration of social conditions along critical sections of the Southern and Eastern Mediterranean shores. In view of this, and in order to accelerate the response of the countries to the multi-faceted challenges facing the shared sea, further assistance is being sought from the GEF through the joining of forces of several GEF Focal Areas, Agencies and funding sources in a Programmatic Approach. The Programme being proposed represents a comprehensive, powerful response to these environmental and social challenges. Its objective is to kick start the implementation of agreed upon priority actions to reduce the major transboundary environmental stresses affecting the Mediterranean Sea and its coastal areas, while strengthening climate resilience and water security, and improving the health and livelihoods of coastal populations. Its focus will be on hotspots of land based pollution, harmful chemicals and wastes (POPs and Mercury), and excess nutrients; critical sections of the coastal zone particularly affected by climatic variability, freshwater stress and habitat degradation; the efficient and sustainable management of priority marine protected areas; measuring progress to impacts and overall Programme coherence.

### Programme Objective

To accelerate the implementation of agreed upon priority actions to reduce the major transboundary environmental stresses affecting the Mediterranean Sea and its coastal areas while strengthening climate resilience and water security, and improving the health and livelihoods of coastal populations.

Program Components	Financing Type <sup>3</sup>	Program Outcomes	Trust Fund	(in \$)	
				GEF Program Financing	Co-financing
<b>1. Reduction of Land Based Pollution In Priority Coastal Hotspots, and measuring progress to impacts</b>	Inv./TA	<p><b>Outcome 1:</b> In coastal hot spots and catchment areas, measurable reduction of harmful chemicals and wastes (POPs, Mercury) and of excess nutrients impacting human health and coastal habitats, achieved.</p> <p><u>Indicators:</u></p> <p>(i) Amount and type of POPs eliminated or reduced. <i>Target:</i> Reduction and disposal (3,250 tonnes) of POPs.</p> <p>(ii) Amount of mercury reduced and disposed. <i>Target:</i> Reduction and disposal (50 tonnes) of mercury.</p> <p>(iii) WWTP extension and upgrade including treated wastewater reuse/reinjection and depollution of catchment areas in priority coastal hotspots. <i>Targets:</i></p> <ul style="list-style-type: none"> <li>- At least 4 WWTP built or rehabilitated.</li> <li>- At least 150,000 m3/d of additional waste water treated to secondary level.</li> <li>- At least 20,000 m3/d of additional treated wastewater reused.</li> <li>- At least 20,000 m3/d of additional sludge digested.</li> <li>- Risk reduction in at least two coastal hotspots.</li> </ul>	GEF TF	26,600,000	655,000,000

<sup>3</sup> Financing type can be either investment or technical assistance.

		<p>(iv) Common regional standards on wastewater and sludge management and reuse, developed.  <i>Target:</i>  Common regional standards on waste water and sludge management and reuse prepared as an input for the deliberation of the Contracting Parties to the Barcelona Convention.</p> <p><b>Outcome 2:</b>  Private/public investments enable pollution reduction in priority coastal and catchments areas through the improvement of water and waste water management systems and the introduction of modern and efficient technologies and practices.</p> <p><u>Indicators:</u></p> <p>(i) Volume of wastewater treated in private/public systems.  <i>Target:</i>  At least three private/public wastewater systems discharging directly or indirectly into coastal hotspots upgraded.</p> <p>(ii) Volume of recycled water in private/public systems returned to supply.  <i>Target:</i>  At least 1.5 million m3 of water recycled per year in private/public systems.</p> <p>(iii) Number of private/public water system clients connected to modern wastewater facilities.  <i>Target:</i>  At least 3.5 million m3 of additional wastewater treated per year in private/public systems.</p> <p><b>Outcome 3:</b>  Littoral countries enabled to identify trends and progress to impacts.</p> <p><u>Indicators:</u></p> <p>(i) Updated baseline (TDA), including gender assessment.  <i>Target:</i>  Baseline TDA is updated by the end of the programme</p> <p>(ii) Report on progress to impacts.  <i>Target:</i>  By the end of the Programme, report on progress to impacts and on the achievement of relevant SDGs.</p> <p>(iii) Number of additional sites for offshore stations.  <i>Target:</i>  Definition of minimum 20 locations for offshore reference monitoring stations.</p> <p>(iv) Proposal for a data sharing regional policy, developed.  <i>Target:</i>  Data sharing regional policy prepared as an input for the deliberation of the Contracting Parties to the Barcelona Convention.</p>			
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<b>2. Enhancing Sustainability and Climate Resilience in the Coastal Zone</b>	TA	<p><b>Outcome 4:</b> Coastal zone sustainability enhanced through the adoption of comprehensive national ICZM strategies, coastal plans and instruments, and the introduction of sustainable consumption and production (SCP) technical, regulatory, economic and market-oriented measures and improving gender equality.</p> <p><u>Indicators:</u></p> <p>(i) Number of hectares of landscapes and seascapes under improved management. <i>Target:</i> At least 12,500,000 hectares under improved management of landscapes and seascapes.</p> <p>(ii) Number of countries implementing comprehensive ICZM and SCP approaches, including Coastal Zone Use-Capability mapping. <i>Target:</i> At least 3 countries implementing ICZM strategies, plans and approaches.</p> <p>(iii) Number of persons, reflecting gender balance, trained on integrated approaches, ICZM, MSP, and adaptation to climate variability and change. <i>Target:</i> At least 300 persons trained, reflecting gender, on ICZM, MSP and CVC adaptation.</p> <p>(iv) Number of persons, involved in awareness raising activities. <i>Target:</i> At least 1,000 persons involved in awareness raising activities on coastal resilience and sustainability.</p> <p><b>Outcome 5</b> Increased resilience to climatic variability and change, and enhanced water security of coastal populations through improved sustainability of services provided by coastal aquifers and by groundwater related coastal habitats.</p> <p><u>Indicators:</u></p> <p>(i) Number of priority coastal aquifers and related habitats under improved conjunctive surface and groundwater management. <i>Target:</i> At least 5 priority coastal aquifers and related habitats under improved conjunctive surface and groundwater management.</p> <p>(ii) Number of countries where nation-wide dialogue on conjunctive surface and groundwater management solutions have been initiated. <i>Target:</i> At least 3 countries have initiate nation-wide dialogues on conjunctive surface and groundwater management solutions</p> <p>(iii) Number of national inventories of submarine groundwater discharges (SGD). <i>Target:</i> All countries complete SGD inventory.</p>	GEF TF	9,975,000	43,000,000
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		<p><b>Outcome 6</b> Balancing of competing water uses improved through water, food, energy and ecosystems integrated governance.</p> <p><u>Indicators:</u></p> <p>(i) Number of priority coastal areas that develop Nexus assessments and endorse a Nexus Strategy/ Action Plan. <i>Target:</i> At least 3 priority coastal areas have a Nexus Strategy / Action Plan.</p> <p>(ii) Number or transboundary basins and aquifers in which cooperation is enhanced. <i>Target:</i> At least 1 transboundary basin/aquifer with enhanced cooperation framework.</p> <p>(iii) Number of bankable projects for priority interventions and investments <i>Target:</i> At least 3 fiches of projects for priority interventions and/or investments.</p>			
<b>3. Protecting Marine Biodiversity</b>	TA	<p><b>Outcome 7</b> Expansion of seascapes under protection in Libya, and improved protected area management through the implementation of the Libyan Marine Protected Areas (MPA) National Strategy, mapping of marine key habitats, monitoring of marine megafauna (mammals, seabirds, turtles and cartilaginous fishes), capacity support mechanisms and adoption of permanent solutions..</p> <p><u>Indicators:</u></p> <p>(i) Number of additional hectares of marine protected areas in Libya. <i>Target:</i> At least 2,500 additional hectares of marine areas under protection in Libya.</p> <p>(ii) Number of additional marine protected areas in Libya having management plans. <i>Target:</i> At least 1 MPA endowed with a management plan in Libya.</p> <p>(iii) Number of MPAs with developed strategies to strengthen the sustainability and effectiveness of the MPAs. <i>Target:</i> At least 1 MPA under sustainable management scheme.</p> <p>(iv) Number of sites covered by marine megafauna monitoring programmes. <i>Target:</i> At least 2 sites covered by marine megafauna monitoring programmes.</p> <p>(v) Number of monitoring networks of marine key habitats. <i>Target:</i> At least 2 monitoring networks for marine key habitats established.</p> <p>(vi) Number of training sessions to Libyan nationals (reflecting gender balance) on MPA networks planning and management, marine key habitats mapping and marine megafauna monitoring. <i>Target:</i> At least 5 training sessions to Libyan nationals (reflecting gender balance) on MPA networks planning and management, marine key habitats mapping, and marine megafauna monitoring.</p>	GEF TF	1,307,339	5,000,000

4. Knowledge Management and Programme Coordination	TA	<b>Outcome 8</b> The increased uptake of lessons and of cutting-edge knowledge generated across the portfolio of interventions, and the active participation to IW LEARN activities, Communities of Practice, and events, improve the capacity of key regional stakeholders, and of the global IW community to build climate resilience, maintain coastal resources, protect biodiversity, and restore coastal ecosystems. Emphasis will be placed on fostering uptake and replication at the regional level of successful policies, practices and technologies implemented under the Programme through ad hoc awareness raising activities and tools: videos, manuals, progress reports, a MedProgramme Bulletin, a “Replication Atlas” highlighting areas and situations where replication of the Programme’s demonstrations should preferentially occur. These tools will target decision makers and practitioners in the Programme countries, IFIs active in the region, the private sector, and regional cooperation entities.	GEF TF	2,375,000	5,000,000
		<u>Indicators:</u> (i) Number of experience notes and scientific publications documenting the knowledge generated across the portfolio of interventions. <i>Target:</i> At least 10 experience notes and peer reviewed scientific publications documenting the knowledge generated across the portfolio of interventions.  (ii) Number of awareness raising communication tools at regional and global levels on the objectives, progress and accomplishments of the Programme. <i>Target:</i> At least 5 awareness-raising tools aimed at the regional and global audiences produced.			
		<b>Outcome 9</b> The effective coordination and learning among all Child Projects, consistency with the Programme objectives, and synergies among projects and partners, ensured.			
		(i) Programme monitoring system successfully developed and periodically reporting (every six months) on the progress of the Programme as a whole, and of child projects. <i>Target:</i> Periodic reports (every six months) on the progress of the Programme as a whole, and of all child projects.			
		Subtotal			
Program Management Cost (PMC) <sup>4</sup>			GEF TF	2,118,808	0
Total Program Cost				42,376,147	708,000,000

PMC is the total of the Project Management Costs of all child projects. For multiple trust fund projects, please provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: (PMC breakdown).

#### C. CO-FINANCING FOR THE PROGRAM BY SOURCE, BY NAME AND BY TYPE

Sources of Co-financing	Name of Co-financier	Type of Cofinancing	Amount (\$)
GEF Agencies	UNEP	In kind/grant	10,000,000
	EBRD	In kind/grant/hard loan	90,000,000
Recipient Governments	Albania, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco and Tunisia.	In kind/grant	38,000,000

<sup>4</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

Bilateral Agency	FFM and GIZ, (tbc)	In kind/grant	10,000,000
Multilateral Agency	EIB	hard loan/In kind	510,000,000
	Other Partners (UNESCO IHP, IUCN, UNIDO, EC, etc.)	In kind/grant	30,000,000
CSO	WWF Med	In kind/grant	2,000,000
	GWP Med	In kind/grant	18,000,000
<b>Total Cofinancing</b>			<b>708,000,000</b>

#### D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, TRUST FUND, COUNTRY, FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Type of Trust Fund	Country Regional/Global	Focal Area	Programming of Funds	(in \$)		
					Program Amount (a)	Agency Fee (b)*	Total c=a+b
UNEP	GEFTF	Regional	International Water		20,500,000	1,845,000	22,345,000
EBRD	GEFTF	Regional	International Water		5,000,000	450,000	5,450,000
UNEP	GEFTF	Regional	Chemical and Waste	POPS and Mercury	11,750,000 <sup>5</sup>	1,057,500	12,807,500
EBRD	GEFTF	Regional	Chemical and Waste	POPS	3,750,000 <sup>6</sup>	337,500	4,087,500
UNEP	GEFTF	Libya	Biodiversity		1,376,147	123,853	1,500,000
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
<b>Total Grant Resources</b>					<b>42,376,147</b>	<b>3,813,853</b>	<b>46,190,000</b>

\* Please indicate fees related to this Program. Refer to the [Fee Policy for GEF Partner Agencies](#).

#### E. PROGRAM'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>7</sup>

Provide the expected program targets as appropriate.

Corporate Results	Replenishment Targets	Indicative Program Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>at least 12,500,000 hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>5 number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect)	<i>metric tons</i>

<sup>5</sup> Total CW PFD grant for UNEP: 11,750,000 USD. Breakdown of this figure is: 6,500,000 USD from CW-2 Program 3 on POPs; and 5,250,000 USD from CW-2 Program 4 on Mercury.

<sup>6</sup> Total CW PFD grant for EBRD: 3,750,000 USD. The entire amount is requested from CW-2 Program 3 on POPs.

<sup>7</sup> Provide those indicator values in this table to the extent applicable to your proposed program. Progress in programming against these targets for the program per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period.

5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	3,250 metric tons
	Reduction of 1000 tons of Mercury	50 metric tons
	Phase-out of 303.44 tons of ODP (HCFC)	ODP tons
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	Number of Countries:
	Functional environmental information systems are established to support decision-making in at least 10 countries	Number of Countries:

## **PART II: PROGRAMMATIC JUSTIFICATION**

*1. Program Description.* Briefly describe: a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; b) the baseline scenario or any associated baseline program/ projects, c) the proposed alternative scenario, GEF focal area<sup>8</sup> strategies, with a brief description of expected outcomes and components of the program, d) [incremental/ additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); and e) innovation, sustainability and potential for scaling up.

### **A) THE GLOBAL ENVIRONMENTAL AND/OR ADAPTATION PROBLEMS, ROOT CAUSES AND BARRIERS THAT NEED TO BE ADDRESSED**

The Mediterranean Sea - the largest semi-enclosed sea in the world - is shared by 21 countries with a coastline of 46,000 km. Its coastal areas are undergoing a dramatic process of development. The populations of coastal states have doubled in the last 40 years to 450 million and will reach over 600 million in 2050. Population load is shifting towards the southern and eastern Mediterranean and about 60% of that lives within 100 km of the coast. In addition, Mediterranean region hosts 1/3 of the world tourism. Population density in coastal areas ranges from double to ten times the national average due to the more favourable climatic, and socioeconomic conditions. As a result of the increased demand for space, water and natural resources, the stress on coastal ecosystems, and the infringement on natural and agricultural land is continuously increasing. Finally, mostly due to tourism, the development pressures are the highest closer to the sea – the zone most exposed to the sea level rise.

The region is characterized by a unique and rich, yet fragile biodiversity, hosted by many diverse ecosystems across the region, which together form an invaluable natural capital on which populations and economies depend on. It is estimated that between 10,000 and 12,000 marine species thrive in the Mediterranean Sea, and that around 20–30% of these species are endemic. A range of human activities threatens many of these species. Pollution from land-based sources, such as discharges of excess nutrients and hazardous substances, marine litter, and degradation of critical habitats, are among the key factors responsible for this biodiversity loss.

The Water Exploitation Index (WEI) - defined as the mean annual total demand for fresh water, divided by the long-term average freshwater resources - shows that southern countries are amongst the most water-stressed countries in the Mediterranean, with many having a WEI higher than 40% (severe water stress). Four southern and eastern Mediterranean countries (Egypt, Israel, Syria and Libya), together with Malta, have WEIs exceeding 80%. According to existing projections, the Mediterranean population classified as 'water-poor', (i.e. below 1,000 m<sup>3</sup> per resident per year) and is predicted to increase from 180 million people today to over 250 million within 20 years. Between 2003 and 2011, the proportion of the Mediterranean region population with access to sanitation increased from 87.5% to 92%. There are still 17.6 million people in the region without sanitation, a third of them living in urban areas. Progress in urban wastewater management is difficult to assess, as the data available do not provide sound evidence on regional trends. However, there is great potential to reuse wastewater in the region as currently only around 1% of wastewater is reused.

<sup>8</sup> For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.



Eighty per cent of the pollution load of the Mediterranean Sea originates from land-based sources, mainly in the form of untreated discharges of urban waste (which includes microbiological, nutrient and chemical contaminants) reaching the sea from coastal sources, rivers and submarine groundwater discharges. Lack of sewage collection, treatment and disposal infrastructure is still the greatest problem in many Mediterranean countries. Only 69% of coastal cities with more than 10,000 inhabitants have sewage treatment plants, resulting in a large annual discharge of more than 1 billion m<sup>3</sup> of untreated sewage to the sea. Overall, 66 million m<sup>3</sup> of untreated industrial wastewater is discharged to the Mediterranean each year. To add to this, agricultural practices cause significant soil erosion and pesticide pollution of surface and groundwater resources, consequently affecting the coastal and marine ecosystems. Uncontrolled coastal development, population expansion and increasing coastal tourism, unregulated and often unsustainable freshwater extraction from coastal aquifers, are among the greatest threats to the marine and coastal ecosystems.

#### The Transboundary Diagnostic Analysis (TDA)

The TDA for the Mediterranean Sea of 2005 identified and analyzed in some detail the major environmental concerns in the Mediterranean Sea:

- decline of biodiversity due to conversion and degradation of critical habitats, introduction of alien species, pollution in the form of excess nutrients and toxic wastes;
- decline in seawater quality due to inadequate sewage treatment, lack of application of best practice in the agriculture use of fertilizers and pesticides, inadequate controls on atmospheric emissions of heavy metals and persistent organic pollutants, inadequate discharge control for industries bordering the sea;
- human health risks due to exposure to POPs, the consumption of contaminated seafood, direct and indirect contact with seawater that is contaminated with pathogens and/or viral agents;
- degradation of coastal ecosystems and loss of related services due to growing demographic pressure and unregulated coastal development.

Ten years later, in response to the growing realization of their important role in determining present and future conditions of the Mediterranean region, the impacts of Climate Change and Variability and of Coastal Aquifers degradation were the subject of two TDA Supplements (ClimVar & ICZM Project 2015 and MedPartnership 2015). These results add new perspectives to the overall diagnostic of the current state of the Mediterranean Sea and its coastal areas, to guide future remedial and adaptation actions.

<b>Mediterranean Sea LME - Transboundary Diagnostic Analysis</b>		
<b>Major Environmental Concerns</b>	<b>Statement of the causes</b>	<b>Main Issues of Transboundary Concern</b>
<b>Decline of Biodiversity</b>	Pollution (sewage, oil, nutrients, etc.), invasive species, introduced species, land reclamation, river damming and flow modification, over-fishing, by-catch, and adverse effects of fishing gear and uses on marine habitats (e.g. bottom trawling), solid waste disposal at sea, uncontrolled tourist presence in ecologically sensitive areas, as well as inadequate public and stakeholders awareness, and inadequate or non-existent legislation and available enforcement means.	Land Based Pollution  Degradation and Conversion of Critical Habitats: Sea Grass Meadows; Coastal Wetlands and Lagoons  Overexploitation of Marine Living resources Alien Species Introduction
<b>Decline in Sea Water Quality</b>	Land based sources of marine pollution, both point and non-point, determine increasing trends in eutrophication and its related oxygen deficiency and bloom of nuisance species; presence of hot spots of pollution (125 identified by TDA) leading to decline in overall water quality, loss of coastal habitats and biodiversity, and human health problems.	Land Based Pollution: (i) point Sources (excess nutrients, toxics and PTS). (ii) non Point Sources (mostly nutrients from agriculture, and sediments).  Anthropogenic Pressures on Coastal Zones

<b>Human Health Risks</b>	Pollutants that degrade the ecosystem also present risks to human health, including heavy metals, organochlorines, pesticides, hydrocarbons, and the like, but also microbial and viral pollution. In addition, the response of the ecosystem to stress may induce toxicity, such as toxic dinoflagellates that arise from eutrophic conditions in some instances. This may affect human health in the region. Primary pathways for human health risks include ingestion of water or seafood products, contact with contaminated seawater (or in some cases beaches), and perhaps contact with contaminated sea food (for marine products workers).	Land Based Pollution  Anthropogenic Pressures on Coastal Zones
<b>Degradation of coastal ecosystems.</b>	Degradation and loss of coastal freshwater resources, and of coastal ecosystem services due to growing population pressure and unregulated coastal development.	Anthropogenic pressure on Coastal Zones  Impacts of climate variability and change

## **B) THE BASELINE SCENARIO**

### 1) Consolidated transboundary cooperation frameworks

In compliance with the provisions of voluntary guidelines and of legally binding instruments of global scope (the GPA and Global Environmental Conventions), littoral Mediterranean countries have developed regional and national action plans and cooperative frameworks for the protection of the Mediterranean Sea LME from land-based pollution and for the sustainable use of its living and non-living resources. During 2014-2015, UNEP/ MAP developed a number of strategic documents, plans and guidelines at the request of the Contracting Parties to the Barcelona Convention. These documents were largely, but not exclusively, based on the results achieved through GEF support. These documents were prepared with the full involvement of all Stakeholders at the regional and national level.

<b>Relevant Regional Policy Frameworks</b>	<ul style="list-style-type: none"> <li>• Barcelona Convention and its Protocols.</li> <li>• Mediterranean Strategy for Sustainable Development 2016-2025.</li> <li>• Strategic Action Programmes to combat Pollution from Land Based Sources (Sap-MED).</li> <li>• Strategic Action Programme for the conservation of Biological Diversity (SAP-BIO).</li> <li>• Action Plan for the Implementation of the ICZM Protocol.</li> <li>• National Action Plans on Land Based Pollution and Biodiversity.</li> <li>• 11 ecological objectives for the Mediterranean Sea and its coastal region based on ecosystem approach and associated by good environmental status targets (GES).</li> <li>• 10 Regional Plans on mercury inputs, WWTP, POPs, food sector.</li> <li>• 8 Regional Action Plans and 1 Regional Strategy for the conservation of endangered or threatened species and their habitats; 1 Action Plan on Species Introductions and Invasive Species.</li> <li>• Bathing water quality criteria.</li> <li>• Updated National Action Plans (NAPs) for LBS, Containing Measures and Timetables 2015-2025 for their Implementation with operational targets and measures to implement the SAP MED and achieve GES.</li> <li>• National Implementation Plans – Stockholm Convention.</li> <li>• Regional Plan on Marine Litter Management in the Mediterranean Sea.</li> <li>• Regional Action Plan on Sustainable Consumption and Production in the Mediterranean.</li> <li>• Sub-Regional Action Plans on Mediterranean Coastal Aquifers.</li> <li>• Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas.</li> <li>• Guidelines for Adapting to Climate Variability and Change along the Mediterranean Coasts.</li> <li>• Guidelines for the preparation of the National ICZM Strategies required by the ICZM Protocol for the Mediterranean.</li> <li>• An Integrative Methodological Framework for coastal, river basin and aquifer management (IMF).</li> <li>• Guidelines on Best Environmental Practices (BEP) for the Environmental Sound Management (ESM) of mercury contaminated sites.</li> <li>• Fishing for Litter Guideline.</li> <li>• Marine Litter Mediterranean wide Baselines Values, and Reduction Targets.</li> <li>• Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean including the High Sea.</li> <li>• Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to achieve Aichi Target 11 in the Mediterranean.</li> <li>• Integrated Monitoring and Assessment Program – IMAP, adopted by the 19th Meeting of the contracting parties to the Barcelona Convention (COP 19).</li> </ul>
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## 2) Priority Setting Processes

<b>Knowledge Base and Identification of Priority Areas and Hot Spots</b>	<ul style="list-style-type: none"> <li>• Results achieved by, and recommendations for action of the MedPartnership<sup>9</sup> and the ClimVar &amp; ICZM<sup>10</sup> UNEP GEF IW projects</li> <li>• 2005 TDA and supplements (Coastal Aquifers, Climate Variability and Change)</li> <li>• Updated list pollution related of hotspots and sensitive areas in the Mediterranean based on GES criteria</li> <li>• Mediterranean Hotspots Investment Program (MeHSIP), European Union</li> </ul>
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The Mediterranean countries have worked together with GEF IW support since the late 90's to set priorities related to national, as well as transboundary environmental concerns and have jointly agreed on the interventions needed to address these priorities in two Strategic Action Programs (SAPs):

- The Strategic Action Programme to Address Pollution from Land-Based Activities (SAP-MED); and
- The Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP-BIO).

Following the formal adoption by the Barcelona Convention of the two Strategic Action Programs (SAP-MED and SAP-BIO (2005 and 2003), the Mediterranean countries translated the SAP priorities into National Action Plans (NAPs), and benefited from international support in moving towards on the ground implementation:

<sup>9</sup> Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership)

<sup>10</sup> Integration of climate variability and change into national strategies to implement the ICZM Protocol in the Mediterranean (ClimVar & ICZM)

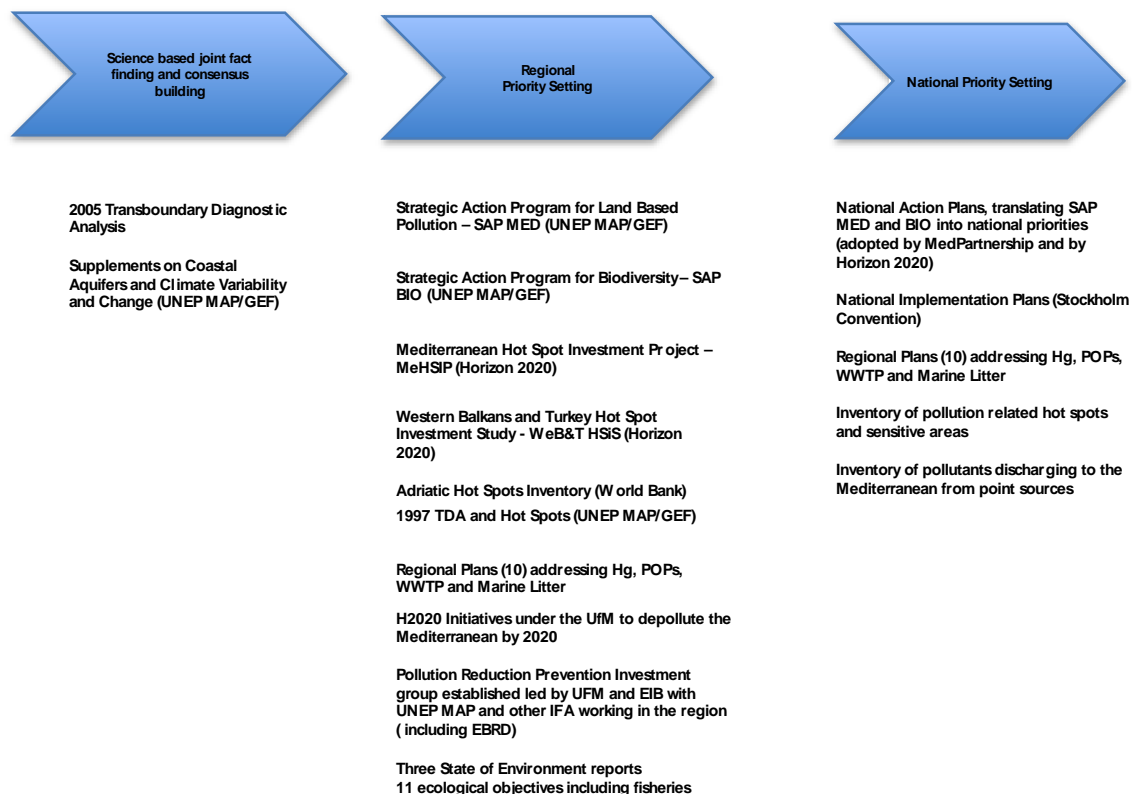
- The MedPartnership project (2010-2015) supported countries in the initial implementation of the SAPs and of the newly developed ICZM Protocol, which was adopted in 2011.
- The Horizon 2020 for the depollution of the Mediterranean initiative (2009 and ongoing), funded by the EC was developed to address SAP-Med (on Land Based Pollution) updated NAP priorities, including development of investments, capacity building and enhancement of monitoring capacity.

The evaluation of the 2003 NAPs implementation showed that over 80% of the national policy and legal frameworks for marine and coastal pollution assessment and control are in place in most Mediterranean countries; and that there is a marked improvement in pollution-related reporting capabilities of the Contracting Parties leading to more data. However, their quality assurance remains a high challenge. In addition, support to institutional structures for enforcement of permitting and compliance are lacking in about one third of the Mediterranean countries. This is manifested in the lack of systematic implementation of monitoring activities; inability to enforce permitting requirements; and lack of transparent reporting measures taken and access by the general public. The regional analysis of pollutants loads discharged to the Mediterranean indicates decreasing trends in a number of pollutants in particular for heavy metals and PAH. However, it shows also that pollution pressures over the marine and coastal environments are still high and require a more effective implementation of existing and additional measures.

The main objective of the recently completed NAP update was to identify and prioritize national measures aimed at achieving Good Environmental Status (GES) with regard to ecosystem approach based UNEP/MAP pollution-related ecological objectives. The updating process was initiated in 2014 with the setting up of national institutional structures, completion of methodological guidance and mobilization of regional and national technical and financial assistance. Updated NAPs were prepared in the course of 2015 through participatory national processes and based on the use of harmonized, comprehensive and integrated approaches. The majority of countries aligned their national planning to integrate the SAP and NAP priorities. The list of 2003 Mediterranean hotspots was reviewed based on GES criteria. In addition, inventories of pollutants discharged in the Mediterranean were undertaken in 2008 and 2013/2014 and results were used to undertake a midterm evaluation of the SAP MED implementation.

More recently, within the context of the MedPartnership project, the body of science-based knowledge on Mediterranean environmental conditions was enriched by two in depth “supplements” to the 2005 TDA; one on Coastal Aquifers and their role in sustaining coastal livelihoods and ecosystems, and the other on the likely impacts of Climate Change on the Mediterranean coasts. Both these important topics were not considered in the SAPMED, while the SAP-BIO underwent an update on climate change issues in 2009 and needed reflection in the TDA. This expanded understanding of the Mediterranean Sea environment was translated into two Sub-regional Action Plans on Coastal Aquifers, and in specific recommendations for Climate Change adaptation priorities and measures.

The body of country endorsed and adopted documents defining priorities and targets, together with the overall process are outlined in the figure below. The proposed Programme will operate within this policy context, and address the priorities defined by the beneficiary countries. It builds upon the experiences and results of (i) the GEF funded MedPartnership and ClimVar & ICZM projects (2010-2015); (ii) the Ecosystem Approach project (2012-2015) funded by the EC; and (iii) the work of UNEP/MAP in the implementation of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention) and its Protocols.




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#### Priority Setting Processes in the Mediterranean Sea Basin

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### 3) Experimentation on the ground: MedPartnership lessons

The MedPartnership UNEP/MAP GEF project included 81 on the ground pilot demonstrations aimed at testing the feasibility in the region and the effectiveness of management tools, practices and technical measures with very encouraging results. The experience gained through these pilot projects informs the design of the proposed Programmatic Approach.

A first cluster of pilot demonstrations focused on coastal land and water resources planning, with emphasis on coastal aquifers and integrated planning approaches. The results were outstanding in terms of: (i) accelerating the implementation at the national level of the ICZM protocol; (ii) implementing and testing on the ground methods to integrate IWRM considerations and coastal aquifer protection into coastal zone management (ICZM); and (iii) formulating a new coastal groundwater vulnerability assessment methodology that merges vulnerability to both vertical (from the land surface), and horizontal (from the sea) quality degradation agents. The cluster focused on Morocco where an assessment of groundwater dependence of the Nador Lagoon was undertaken and multi-tracer hydrogeochemical techniques was demonstrated in the Bou-Areg coastal aquifer to enabled researchers to identify which natural processes or anthropogenic activities were responsible for elevated levels of salinity and nitrites in the aquifer and lagoon. In the same cluster vulnerability maps were produced for the Novljanska Žrnovnica karstic spring catchment area and Pula coastal aquifer in Croatia and the Ghar El Melh coastal aquifer in Tunisia. The “Integrative Methodological Framework” (IMF) on ICZM, IWRM and coastal aquifers was implemented in the Buna/Bojana (Albania/Montenegro) and Reghaia (Algeria) coastal watersheds. The outputs from these demonstrations were used to inform the development of the coastal aquifer supplement to TDA-MED, which includes concrete recommendations for adoption. Moreover this first cluster was instrumental to the preparation of the ICZM national strategy in Algeria, Croatia and Montenegro.

The second cluster of interventions focused on the reduction of Land Based Sources of pollution and on the implementation of the SAP-MED. The demonstration under this cluster allowed to: i) prepare a study addressing phosphogypsum sludge management and the fertilizer industry in Tunisia and a Guide on best practices for ESM of phosphogypsum sludge; ii) prepare a long term action plan to implement the policy reform, prepared and updated guidelines on BOD control and chromium recycling in Turkey, and prepare the guidelines “Towards a more sustainable tanning sector in the Mediterranean; iii) and develop an inventory of lube oils in Algeria, covering economic and technical aspects of the available options related to setting up a management system in line with environmental standards and international law, finalize the National Plan on the management of lube oils, and develop guidelines for ESM of Lube Oil in the Mediterranean region; iv) efficiently apply the TEST approach in 7 industrial sectors in 43 pilot sites in 3 countries resulting in annual reductions in industrial waste pollution equivalent to a BOD5 reduction of 3,238 tonnes and COD reduction of 4,535 tonnes. Water savings of 9.7 million m3/year was achieved; and v) allow the elimination of 930 tonnes of PCBs in Bosnia and Herzegovina, Egypt and Turkey, and the inventory and identification of over 1,500 tons PCBs in several countries.

The third cluster of pilot demonstrations focused on the conservation of biological diversity and on management and financial sustainability of MPAs. The work done was instrumental to achieve impressive results such as: i) developing MPA management plans in Algeria (Taza National Park), Croatia (Telascica, Lastovo, Mljet, Kornati and Brijuni), and Turkey (Kas-Kekova); ii) establish management unit in the MAP of Cap Negro-Cap Serrat (Tunisia); iii) perform and develop a financial analysis for the establishment of new MPAs, a regional study on financial needs of Mediterranean MPAs, a guide for MPA financing in the Mediterranean, and 3 business plans for the MPAs of Porto Palermo Bay (Albania), Réghaia (Algeria), and Cap des Trois Fourches (Morocco); and iv) support the creation of new MPAs in Morocco (Cap des Trois Fourches), Algeria (Reghaia), Tunisia (Kuriate Islands) and Albania (Palermo Bay).

MedPartnership pilot demonstrations		
Title	Country/Sites	# Of Pilots
<b>Promotion of integrated approaches: ICZM, IWRM and management of coastal aquifer.</b>		
Hydrogeochemical assessment of the effects of human pressure on coastal groundwater quality for the development of water management strategies	Morocco (Nador Lagoon and Bou Areg aquifer)	1
Coastal aquifer vulnerability mapping	Croatia (Novljanska Zrnovnica karstic spring and Pula coastal aquifer)	3
	Tunisia (Gar El Melah)	
Coastal Zone Plan: Joint ICZM and IWRM Plan, integrating Groundwater/Aquifers	Albania/Montenegro (Buna/Bojana coastal zone)	1
Coastal Zone Plan: ICZM Plan integrating Groundwater/Aquifers	Algeria (Reghaia coastal zone)	1
Impact of climate change on water resources and coastal wetlands	Lebanon (Deir El-Nouriyeh-Cliffs of Ras Ech-Chekkaa and Tyre Beach Natural Reserve)	1
	Algeria	
Preparation of National ICZM Strategies	Croatia	3
	Montenegro	
Advancing IWRM planning at the river basin level in the East Mediterranean	Lebanon and Syria: Orontes/Assi River	1
<b>Pollution from land based activities, including Persistent Organic Pollutants</b>		
Pilot project on the management of phosphogypsum wastes from phosphate fertilizer production	Tunisia	1
Pilot project on chromium, nutrients and BOD control in tanneries	Turkey	1
Pilot project on recycling and regeneration of used lubricating oils	Algeria	1
Pilot project on recycling of lead batteries	Syria	1
Transfer of Environmentally Sound Technology	Tunisia (Tunis, Sfax, Sousse)	43 (7 sectors)
	Morocco (Tangier, Tetouan)	
	Egypt (Alexandria, El Mex Bay, Abou Quir)	
Demonstration projects to improve the management programme of PCBs and facilitate the implementation of NIPs and MED-SAP	Albania, Egypt, Libya and Syria	4
<b>Conservation of biological diversity</b>		

Identification and planning new MPAs to extend the regional network and enhance its ecological representativeness in Albania, Croatia, Montenegro and Tunisia	<ul style="list-style-type: none"> <li>- Albania (Karaburun MPA, Porto Palermo-Llamani Bay future MPA)</li> <li>- Algeria (Reghaia future MPA)</li> <li>- Croatia (selected areas of the Primorje-Gorski Kotar County)</li> <li>- Egypt (Sallum MPA)</li> <li>- Lebanon (Nakoura<sup>11</sup>, Ras Chekaa*, Enfeh, Raoucheh, Saida, Tyre)</li> <li>- Montenegro (Kotor Bay)</li> <li>- Morocco (Cap des Trois Fourches future MPA)</li> <li>- Tunisia (Kuriat Islands future MPA, North-Eastern Kerkennah Islands future MPA)</li> </ul>	16
Demonstration Project - Libya: The environmental case for a national network of MPAs in Libya	Libya (Ain Al-Ghazala Coastal Lagoon and Bumba Gulf MPA <sup>12</sup> , El Kouf National Park)	2
Improved management of marine protected areas:	<ul style="list-style-type: none"> <li>Turkey (Kas-Kekova SPA)</li> <li>Algeria (Taza National Park)</li> <li>Croatia (Lastovo, Mijet, Telascica, Brijuni, Kornati MPAs)</li> </ul>	7
<b>Ensuring management and financial sustainability of regional and national MPA networks</b>		
Establishment of the management unit of the Cap Nègro-Cap Serrat MPA, development of its Business Plan and identification of sustainable financial mechanism for MPAs	Tunisia (Cap Nègro – Cap Serrat MPA)	1
Demonstration Project on financial sustainability mechanisms for at least three new MPAs in different areas	<ul style="list-style-type: none"> <li>- Albania (Porto Palermo-Llamani Bay future MPA)</li> <li>- Algeria (Reghaia future MPA)</li> <li>- Montenegro (Kotor Bay)</li> <li>- Morocco (Cap des Trois Fourches future MPA)</li> </ul>	4
Supporting fisher's participation in monitoring and management of coastal MPA's	Morocco, Tunisia	2

#### 4) Highlights on the Current Situation

##### (i) *Climate Change and Variability*

The Mediterranean Sea region has been identified as one of the main climate change global hotspots (i.e. the areas most responsive to climate change). The recent IPCC Fifth Assessment Report (2013-2014), considers the Region as “highly vulnerable to climate change”<sup>13</sup>, also mentioning that it “will suffer multiple stresses and systemic failures due to climate changes”. Physical changes in the Mediterranean climate have been widely observed and such trends are projected to continue in the future. Major changes are related to an exceptionally high temperature increase compared to the European and global average, in the range of 2 to 6.5 °C by the end of the century. This is expected to be accompanied by a particularly large decrease in annual mean precipitation especially in summer and an increase in evaporation. A rise of 7 to 12 cm in the overall level of the Mediterranean Sea compared to the past decades is projected by 2050, with larger sea rise occurring on eastern and southern Mediterranean coasts (the IPCC predicts a sea-level rise of 0.1–0.3 m by 2050 and of 0.1–0.9 m by 2100, with significant impacts on the southern Mediterranean region). Climate change hazards are coupled with existing socio-economic processes associated with growing biogeographical vulnerability and exposure in coastal areas of the Mediterranean region. One of the primary climate change impacts is on water resources and availability for the main economic sectors and dependent ecosystems. Situations of water scarcity in combination with expected climate change-related phenomena will lead to reduced runoff and groundwater recharge and consequently to diminished water quality and quantity in some countries. Lower precipitation and increasing temperatures in the southern and eastern Mediterranean will exacerbate aridness, land degradation and desertification. Sea-level rise and storm-related floods will make low-lying zones and coastal activities increasingly vulnerable to submersion and beaches vulnerable to erosion. Mediterranean coasts are highly urbanized, and due to the high predominance of summer tourism, most of the touristic facilities tend to locate as close

<sup>11</sup> Site already declared as an MPA thanks to the project efforts

<sup>12</sup> Already declared as MPAs thanks to the project efforts

<sup>13</sup> IPCC, Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects. Chapter 21.5.1.2. Hotspots

to the sea as possible. Rising sea level may endanger a high portion of the coastal facilities including adjacent infrastructure. Losses of coastal and marine habitats and ecosystems are also largely implied. Economic loss due to lower tourism will significantly impact the region and especially women as their traditional and cultural gender roles heavily rely on steady water access. This might be exacerbated by the impact of climate change that will also affect education, traditional gender roles, sanitation, etc.



Risk Assessment Map to climate related hazards: erosion, floods, seawater intrusion (ClimVar Project, Plan Bleu 2015 based on coastal forcing, vulnerability and exposure)

## (ii) Coastal zones

Total population of the Mediterranean countries grew from 276 million in 1970 to 466 million in 2010, and is predicted to reach 529 million by 2025. More than a third lives in coastal administrative entities totaling less than 12% of the surface area of the Mediterranean countries. The population of the coastal regions grew from 95 million in 1979 to 143 million in 2000, and could reach 174 million by 2025 (UNEP/MAP/BP/RAC 2005, 2012).

Besides this constant growth of the permanent population, coastal tourism is another driver for coastal urbanization. The Mediterranean region hosts 1/3 of the world tourism attracted by the clean and transparent Mediterranean waters, the beaches and the scenic beauty of the Mediterranean landscapes and seascapes.

Tourism is a huge consumer of natural resources used to supply visitors with a variety of goods and services:

- drinking water – an extremely scarce resource in many coastal areas;
- food – sometimes causing pressure on local production, especially of seafood, and leading to over-fishing;
- electric power and cooling/heating facilities – making tourism a massive consumer of energy.

Moreover, coastal tourism industry produces serious environmental impacts by causing marine and fresh water pollution through the discharge of sewage and the disposal of considerable quantities of solid waste.

Since 1960's, due to these trends pressures on the coastal zones are growing all around the Mediterranean. The fact that the sea level rise is becoming increasingly certain does not stop this trend, and in some places does not even slow it down. The so-called ribbon or linear development (including infrastructure) continues along the Mediterranean coasts, exposing properties and humans to the risks caused by climate change in general and the sea-level rise in particular. In addition to the fact that this kind of development is extremely inefficient and unsustainable, the only option for adaptation to the sea-level rise in such cases is to retreat from the coastline. Therefore, it is important to make governments, populations and investors aware of the problem and, in the longer run, ensure that the costs of remedies are born by the property owners.



High concentration of population and economic activities in the coastal zones causes numerous pressures on resources; this relates for example to space occupation, to the water/food/energy/ecosystem nexus. Densely populated coastal regions, coupled with tourism activities generate high pressures on water, in particular on aquifers as major water resource, on ecosystems, habitats, biodiversity and landscapes, emitting nutrients and wastewater, solid waste, marine litter and microplastics, as well as industrial waste into the environment. It is of utmost importance to address these issues at their origin i.e. to create conditions for minimizing pressures and impacts on the environment, to propose responses and solutions that address multiple pressures and influence drivers in a way to lead development towards sustainability.

These challenges could and should be handled by applying the integrated approach to the management of coastal zones that help to control urbanization; to preserve the integrity of coastal and marine ecosystems; and to guide towards sustainable use of natural and cultural resources. It is by revealing and managing the space/water/food/energy/ecosystem nexus that the future development can be oriented towards sustainability and the efficient environmental protection ensured. Applying ICZM principles will allow integrating environmental protection with spatial planning and economic development i.e. to integrate policies and establish frameworks for cooperation of all concerned stakeholders aimed at influencing current and future practices. Their active participation, raised awareness and sufficient capacity are the best guarantees of the so needed change of behaviour towards the environment: by acting on the source of pollution in application of the prevention and precautionary principles it is possible to cope with the pollution before it happens, this being the crucial dimension for attaining sustainability.

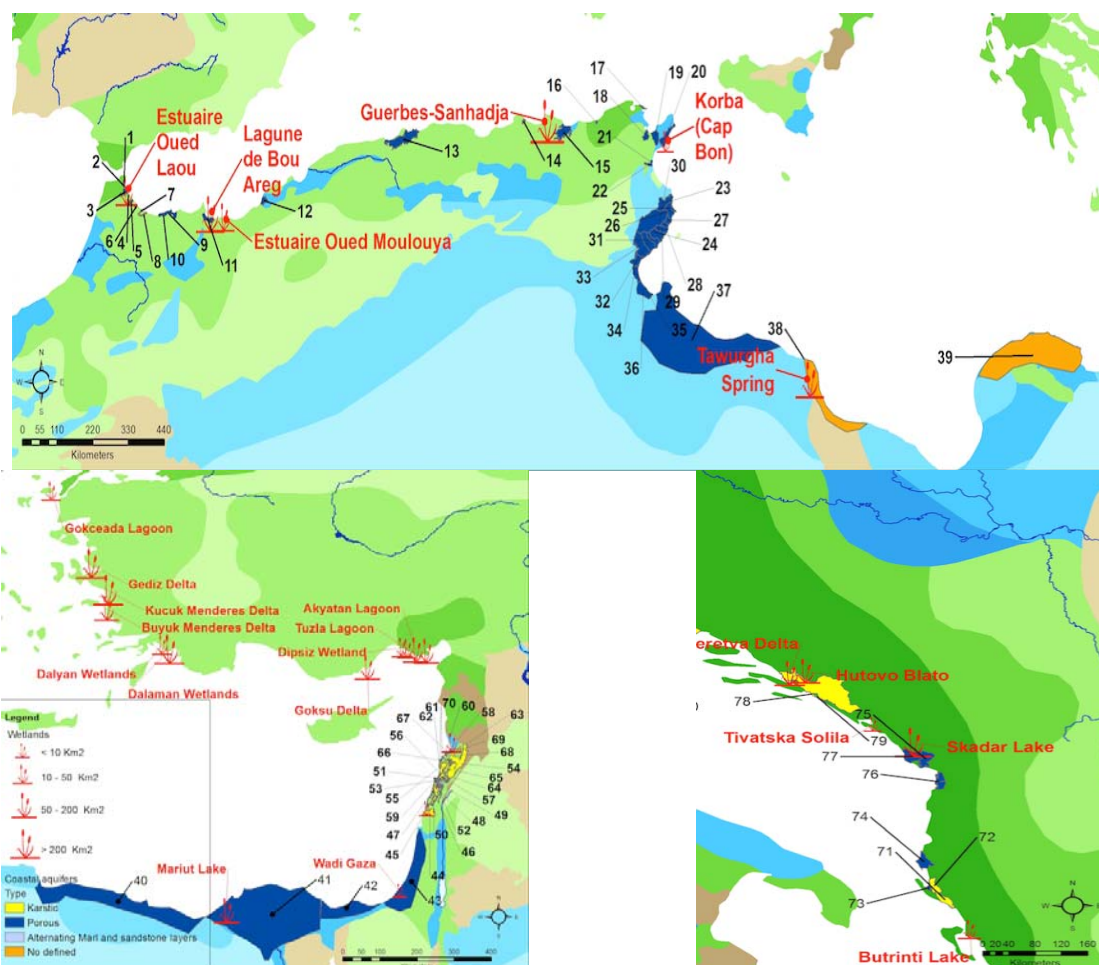
### *(iii) Coastal Aquifers and Groundwater Related Ecosystems*

The extensive work carried out as part of MedPartnership has allowed the drawing of a number of general conclusions valid for all countries involved. First of all, the importance of coastal aquifers within the context of the coastal zone including the shallow marine environment has been fully confirmed. It can be now stated, based on solid information, that:

- coastal aquifers are a major water resource along the Mediterranean coastline, and often represent the main source of drinking water for the growing littoral populations;
- submarine groundwater discharges are large, and in places superior to surface water inflows, hence coastal aquifers contribute to, and sustain shallow marine ecosystems;
- major coastal wetlands, lagoons, humid zones and coastal habitats, providing very valuable services and contributing to coastal livelihoods and biodiversity, are all in part or totally dependent on groundwater regimes.

In spite of all this, the regional picture that emerges from the assessment of the current state of these critically important resources is one of generalized neglect and progressive degradation. Findings in fact show an alarming situation:

- Generalized coastal groundwater degradation contributes to exacerbating issues of transboundary concern at the LME level, such as nutrient pollution, habitat and coastal freshwater dependent ecosystems degradation;
- Management frameworks for coastal groundwater are absent, and these resources are not formally recognized as critical for the sustainability of coastal developments, and as being highly vulnerable;
- Unregulated exploitation of groundwater is common, and no quality-quantity safeguards exist or are applied. Conflicts among uses (agriculture, domestic, tourism, environment, energy, etc.), are common and potentially disruptive;
- Most of the 26 representative wetlands studied are reported as having their functionality altered in different degrees. Half of the wetlands is moderately altered, and the other half is highly to very highly altered;
- No specific laws or policies exist in the vast majority of the countries protecting and regulating the use of coastal groundwater, taking into account its strategic value, its high vulnerability to contamination, and its interactions with the sea.



Mediterranean Priority Coastal Aquifers and related Wetlands (Source MedPartnership – UNESCO-IHP 2015)

#### (iv) *Nutrients and wastewater*

With a typical tidal range of less than 50 cm, the Mediterranean Sea is microtidal. This reduces the potential for dilution and dispersion of dissolved and particulate wastes. It is also one of the most oligotrophic (i.e. poor in nutrients) oceanic systems, and is characterized by an eastwards longitudinal gradient in this oligotrophy. The main source of nutrients in the Mediterranean lies in the inflowing Atlantic surface waters at the level of the Gibraltar Strait. These inflowing waters flow eastward along the African coasts in the western Mediterranean, then cross the Sicily Strait and continue their flow again along the northern African coasts. As the waters move eastwards from the Gibraltar Strait, they become depleted in nutrients. By the time they reach the Egyptian coasts, their nutrient signature has almost disappeared. Additionally, the Nile River nutrient signature has disappeared due to the 1960s Nile Dam construction. All this contributes towards making the Levantine Basin (at the eastern part of the Mediterranean Sea) one of the most oligotrophic areas in the world ocean. Additional sources of nutrients exist in the Mediterranean, but these are localized and have rather small impacts. One is the outflow of Black Sea surface waters into the Aegean, which have an influence limited to the north Aegean; a second source is the Po River, emptying into the Adriatic on its western coast. The most eutrophic waters in the western basin are located on the north shore, at the mouth of the large rivers Rhone and Ebro. Riverine nutrient inputs are relatively low, as most river systems discharging in the Mediterranean Sea are small. High nutrient inputs to small rivers may be important in most North African oueds, as they collect rich effluents in large quantities. In these rivers/oueds, metals, nitrates and organic carbon reach concentrations that could affect biological populations after heavy rains following dry periods. The unique biogeochemical characteristics of the Mediterranean Sea determine the fate of physicochemical and biological cycles affecting all aspects of ecological processes. Primary production and phytoplankton biomass are reduced, due to the oligotrophic nature of the basin, giving rise to clear and transparent coastal and marine waters. Primary productivity at local scale is also controlled by factors other than limited nutrient input, including stratification of the water column, transparency and surface currents. Eutrophication is very common in sheltered marine waterbodies, such as harbours

and semi-enclosed bays along the Mediterranean coast, mainly in the vicinity of coastal towns subject to untreated or partly treated urban effluents containing significant loads of nutrients and suspended matter (degradable or inert).

The discharge of untreated municipal wastewater in coastal areas or rivers flowing into the Mediterranean Sea remains a major environmental issue in most southern and eastern Mediterranean countries and therefore constitutes one of the key environmental challenges. Municipal wastewater carries high loads of nutrients (nitrogen and phosphorus), pathogens and microorganisms (including coliforms, fecal streptococci, and salmonellae) posing direct or indirect risks to human health and well-being. In cities with intense industrial activity, municipal wastewater discharged directly into public sewerage systems generally contains a variety of chemical wastes: total dissolved solids, ions (such as sodium, calcium and magnesium), organic compounds (such as phenols, pesticides and chlorinated hydrocarbons) and metals (such as cadmium, zinc, nickel, and mercury). These substances are of particular concern due to their toxicity, bio-accumulation and their resistance to conventional wastewater treatment methods.

The provision of wastewater treatment varies across the region, but in many cases treatment plants are often absent or do not function optimally. Recently, a number of inventories of municipal wastewater treatment facilities in Mediterranean countries have been published (MAP Technical Report Series No 157, 2004; UNEP/MAP, 2011; UNEP (DEPI)/MED WG.357/Inf.7). These studies provide information on the population served by WWTPs, the degree of the treatment provided, quantities of wastewater produced and disposal alternatives. The most recent inventory (UNEP/MAP/MED POL, 2011) also considers a number of cities with a population of > 2,000 inhabitants that discharge their municipal wastewater (treated or untreated) into major rivers. Wastewater produced from the cities located in the catchment area of a river draining into the Mediterranean Sea will eventually end up in the sea, thus indirectly contributing to the pollution of the marine environment, and in some cases leading to eutrophication<sup>14</sup>.

Mediterranean Regional plan on BOD from wastewater treatment plants (COP 16, 2009)

The establishment of wastewater treatment plants in all cities around the Mediterranean Sea with more than 100,000 inhabitants and appropriate outfalls and/or appropriate treatment plants for all cities with more than 10,000 inhabitants is amongst the targets of the Genoa Declaration (1985) approved by the Contracting Parties to the Barcelona Convention. In addition, the Contracting Parties adopted in 2009 Decision IG.19/7 "Regional Plan on the reduction of BOD5 from urban wastewater in the framework of the implementation of Article 15 of the LBS Protocol". This Regional Plan shall apply to the collection, treatment and discharge of urban wastewater with the objective to protect the coastal and marine environment and health from the adverse effects of the direct and indirect wastewater discharges, in particular adverse effects on the oxygen content of the coastal and marine environment and eutrophication phenomena. It obliges the Mediterranean countries to ensure a sewage collection system for cities with more than 20,000 population equivalent and/or economic activities are sufficiently concentrated for urban wastewater to be collected and conducted to an urban wastewater treatment plant or to a final discharge point.

A number of measures have been defined:

1. The Parties shall ensure that all agglomerations collect and treat their urban wastewaters before discharging them into the environment using collecting systems that satisfy defined requirements;
2. The Parties shall adopt National BOD5 Emission Limit Values (ELVs) for urban wastewaters after treatment (i.e. maximum allowable concentration of BOD5 to be finally discharged from WWTP to the receiving water environment);
3. The Parties shall ensure that the characteristics of collected and treated urban waste waters shall, before discharge in the environment, be in accordance to provisions on prescribed ELVs.

The progress in municipal wastewater management is difficult to assess, as the data available do not provide sound evidence or trends at the regional level. In general terms, an increase in the volume of wastewater collected and treated is observed in those countries for which data is available. This increase does not only cover the concurrent population growth but also contributes to the relative improvement of the wastewater management practices in the region. However it is not possible to confirm whether these trends are the result of increased data coverage or the result of heavy investments in wastewater treatment contributing towards social and economic development or a combination of both. There is strong indication that inhabitants and environment in coastal watersheds draining into the marine environment are the most severely impacted by the lack of appropriate sanitation systems. Although local improvements have been observed, it is difficult to assess the progress at the regional scale. Nevertheless, the extent

<sup>14</sup> 15 coastal countries reported on eutrophication problems, among which 11 countries characterized these problems as medium (Albania, Algeria, Greece, France, Israel, Morocco, Palestine, Slovenia, Spain, Syria and Tunisia) and 4 countries as important (Croatia, Egypt, Italy, Turkey).

of reuse of both treated and untreated wastewater is limited to 1 % in the beneficiary partner countries. Over the last few decades, the eastern and southern Mediterranean countries have responded to water scarcity by investing heavily in infrastructure, including in projects on wastewater, which is now recognized as a very important resource. According to the European Investment Bank (EIB), between 2003 and 2008, EUR 692 million was provided in loans through the Facility for Euro-Mediterranean Investment and Partnership (FEMIP) to support access to water resources and to tackle the most significant pollution sources of the Mediterranean. The financial capacity of the public sector in most countries is limited and unable to provide the necessary resources for investing in water (UNEP, 2010). For this reason, countries like Morocco and Algeria are increasingly engaging in public/private partnerships (PPPs) for various water projects: upgrading and managing drinking water networks and sewage systems, and constructing wastewater treatment plants (WWTPs). These investments, however, have not always been accompanied by the necessary institutional and policy changes, and often do not generate optimal economic returns.

#### (v) Solid Waste

Municipal solid waste (MSW) generation in partner countries continues to grow (+15% over the last 10 years) mostly due to population and economic growth. Twice as much municipal solid waste is currently generated in Europe as in partner countries. Whilst the situation varies widely between countries and more particularly from one local area to the next, it appears that average municipal solid waste production stands at around 270 kg/per capita/year for the partner countries compared to 520 kg/per capita/year in the EU-27. The organic waste represents the biggest share of the MSW. However, following changes in consumption patterns, largely as a result of the importation of manufactured goods, the proportion of biodegradable waste decreases as the share of plastics and other synthetic material has increased.

Despite important improvements in the last decade, the collection and treatment of MSW is a significant issue in most partner countries. Few of them succeed in reaching full waste collection coverage, especially in rural areas (national average collection rate is around 76%). Important efforts took place in the last decade to close unregulated/illegal dumps and open controlled landfills; nevertheless the management of MSW in most of the partner countries relies almost exclusively on dumps. 58% of the collected waste is disposed in open dumps and 31% in sanitary landfills. The share of recycling and composting represents less than 10% of the total collected amount. However, with the development of more integrated waste management policies, countries have reported increasing number of waste sorting initiatives promoting recycling and reuse. After collection, municipal solid waste is generally transported to a location where collection vehicles are emptied. This location may be a material- processing facility, a transfer station, a sanitary landfill or an open dumpsite. The municipal solid waste treatment rate allows for measuring the efficiency of the municipal solid waste management system. The total amount of municipal solid waste (MSW) treated in beneficiary countries is not well known, with the exception of Palestine. No data are available for Algeria, Morocco and Tunisia. In Egypt, Palestine, and Lebanon, this rate is 19 %, 31 %, and 70 %, respectively solid waste treated by landfilling and recycling for those countries for which data are available. Recycling rates have remained relatively constant over a long period (since 2000). More than half the collected waste is disposed of in open dumps, the main method of waste 'treatment' in most countries. This fraction amounts to 83.5 % of MSW in Egypt, 76 % in Palestine, 67 % in Algeria and 62 % in Morocco. This value is instead low in Tunisia (13 %).

There are indications that in the Mediterranean region, solid waste management is tackled by 20% of the 912 identified projects for protecting the Mediterranean Sea from pollution. These 182 solid waste projects relate to agglomerations of more than 200,000 inhabitants served. Solid waste management is referred to in 117 Integrated Projects, and 82% of NAPs projects are focused on solid waste. Some 31% of the projects are operational and around 29% are in execution or under preparation. In addition, 38 % of the projects have secured funding.

#### *Conclusive remarks*

- An overall reduction trend on MSW generation has been identified in the Mediterranean region for the period 2003-2011; however, this regional trend needs to be further confirmed with data missing from some countries for certain years.
- As for MSW generation per capita per year, the highest rates are close to 600 kg/capita/year. The lowest rates in the region are between 200-300 kg/capita/year.
- Most EU countries show collection rates near 100% while the other countries vary between 40-85%.

- Open air dumping is a common disposal method in several Mediterranean countries.
- Recycling and composting are not common in most Mediterranean countries

(vi) *Marine Litter and Microplastics*<sup>15</sup>

The root cause of marine litter from 'shoreline and recreational activities' lies in the fact that solid waste management in most Mediterranean countries is still very poorly executed. Funding, awareness and individual good waste management practices are insufficient in this region. Current legal and illegal waste-handling practices contribute to the presence of marine litter. The inadvertent release of litter from coastal landfills and garbage from water transports, recreational beach and roadside litter and the illegal dumping of domestic and industrial garbage into coastal and marine waters are practices that contribute to the marine litter problem (UNEP, 2009). Waste also reaches the coasts, either through streams, rivers, drains or via waves, currents and tides, and therefore should also be tackled as a land-based source requiring both the provision of solid waste management services and proper drainage infrastructure. During the summer season, seaside town populations are sometimes twice the winter time number. In some tourist areas, more than 75 % of annual waste production is generated during the summer season.

Marine litter has become a global issue, and is high up on the global environmental agenda. The only new target agreed at Rio+20 was on marine litter. The Honolulu Strategy, the Honolulu Commitment, and the Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities (UNEP/GPA) are global mechanisms that promote sound marine litter management in partnership among all stakeholders. In Europe, the Berlin conference held in April 2013 drew together countries from across Europe, the four European regional seas, non-governmental organizations (NGOs), the private sector, the research field and politicians. Together, all highlighted the Berlin message: “Notwithstanding the need to expand the knowledge base on marine litter, there is enough knowledge at hand to take necessary action now”.

The 2010 assessment of marine litter in the Mediterranean created a sound basis on which to prepare the 'Strategic Framework for the Management of Marine Litter in the Mediterranean 2012–2020' that was adopted at the 2012 17th Meeting of the Contracting Parties to the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean and its Protocols (COP 17) held in Paris, France. The same decision mandated the UNEP/MAP Secretariat to prepare a Regional Plan on Marine Litter Management, under Article 15 of the LBS Protocol. The Regional Plan on Marine Litter Management in the Mediterranean adopted by the 18th meeting of the Contracting Parties to the Barcelona Convention, in 2013, provides for ambitious and innovative legally binding measures on solid waste hierarchy management, prevention measures (reduction of marine litter generation at source) and up-to-date sustainable production and consumption (SCP) tools application. It aims at enhancing regional cooperation to take concrete actions and measures, with efforts to improve monitoring, research and assessment, to fill the knowledge gap and support measure implementation, enhance enforcement, and create partnerships with local authorities, the private sector, and civil society in order to make a difference. The marine litter regional plan became binding in July 2014 and sets strict deadlines (2020 and 2025) for the implementation of measures. Currently an updated assessment report on Marine Litter (2015) reinforced the previous finding that in the Mediterranean marine litter is a critical issue. The problem is exacerbated by the basin's limited exchanges with other oceans, its densely populated coasts, highly developed tourism, 30% of the world's maritime traffic passing through and various additional inputs of litter from rivers and urbanized areas. It also provides data on waste and plastic inputs to the marine and coastal environment for each Mediterranean country. In addition to providing the most important sources of litter, it specifies changes in their composition and transport patterns, presenting updated results of modelling. The assessment concludes that marine litter management and reduction measures in the Mediterranean need to be further developed, implemented and coordinated. It also highlights a number of points to be addressed to attain a better understanding of the challenges and provide the scientific and technical background for a consistent monitoring and science based prevention, reduction and management measures.

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<sup>15</sup> Microplastics are small plastic particles in the environment that are generally smaller than 1mm down to the micrometer range. Microplastic particles may highly concentrate and transport synthetic organic compounds (e.g. persistent organic pollutants), commonly present in the environment and ambient seawater, on their surface through adsorption. Evidence suggests this to be a potential way through which POPs may enter the food webs. Of further concern, additives added to plastics during manufacture may leach out upon ingestion, potentially causing serious harm to the organism. Endocrine disruption by plastic additives may affect the reproductive health of humans and wildlife alike.

The Mediterranean Sea is a great accumulation zone of plastic debris. The average density of plastic, as well as its frequency of occurrence, is comparable to the accumulation zones described for the five subtropical ocean gyres. Plastic debris in the Mediterranean surface waters is dominated by millimeter-sized fragments, but shows a higher proportion of large plastic objects than that present in oceanic gyres, reflecting the closer connection with pollution sources. The accumulation of floating plastic in the Mediterranean Sea (between 1,000 and 3,000 tons) is related to the high human pressure together with the hydrodynamics of this semi-enclosed basin, with outflow mainly occurring through a deep-water layer. Plastic debris absorbs contaminants, including bio accumulative compounds, about one hundred times more efficiently than naturally occurring suspended organic matter. Given the biological richness and concentration of economic activities in the Mediterranean Sea, the effects of plastic pollution on marine and human life are of particular concern in this plastic accumulation region. Clean-up activities on the shoreline could be very effective in the Mediterranean Sea since shore deposition of floating debris is common in this semi-closed sea. However, as the production of plastic materials will likely continue to increase in the coming decades, management strategies should be also addressed at the pollution sources applying SCP approaches in order to prevent the release of plastic discards to the environment.

The UNEP/MAP - Barcelona Convention is taking action on this issue to reinforce the legal framework in the region. The Contracting Parties to the Barcelona Convention adopted a *Regional Plan on the Management of Marine Litter in the Mediterranean* (Decision IG.21/7) at COP18 in November 2013. The Plan was further reinforced by the decision (Decision IG.22/10) on *Implementing the Marine Litter Regional Plan in the Mediterranean* adopted at COP19 in February 2016. UNEP/MAP was leading on the development of both documents and will ensure the full complementarity of the regional Plan with the MedProgramme.

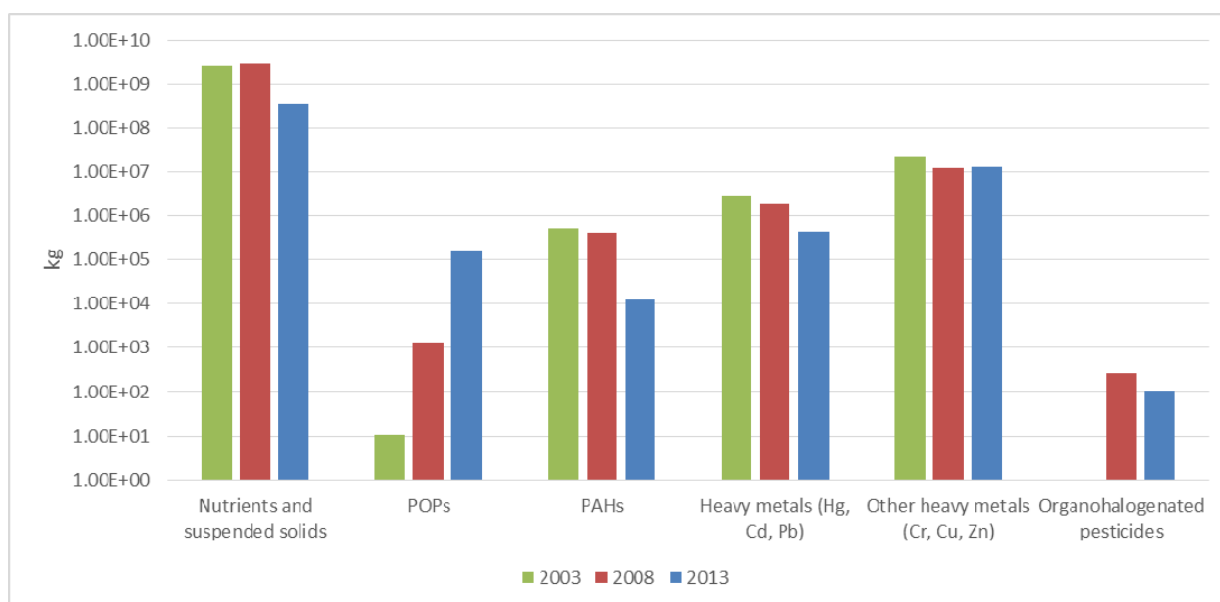
Moreover the MedProgramme will be interlinked with an EU funded marine litter project, in particular the monitoring component, for the purpose of assessing Good Ecological Status in the Mediterranean. The overall objective of this project is to support UNEP-MAP/Barcelona Convention and its Contracting Parties to prevent and manage Marine Litter through the implementation of the Marine Litter Regional Plan mentioned above, in synergy with the relevant work under UNEP/GPA Global Partnership for Marine Litter, the implementation of the European Union (EU) Marine Strategy Framework Directive (MSFD), the UfM H2020 initiative for a cleaner Mediterranean, the EU SwitchMed Programme and in coordination with the other European Regional Seas.

(vii) Industrial Wastes - POPs and Mercury

Industrial pollution remains a high challenge in the Mediterranean. The most recent analysis of pollutants loads discharged to the Mediterranean from 2003-2013, indicates decreasing trends for a number of pollutants in particular for heavy metals and PAH. However, it shows also that pollution pressures over the marine and coastal environments are still high and require a more effective implementation of existing and additional measures. National Baseline Budget (NBB) is the reporting tool established by UNEP/MAP to detect any possible reduction trend in the direct and indirect releases of pollutants into the marine environment. NBB compiles national pollutant discharges to air and water for a large number of pollutants with a five-year periodicity. NBB has been reported in 2003, 2008 and 2018.

In terms of pollution reduction, and in spite of data gaps, it is obvious that pressures from land-based sources remain high; therefore, trend monitoring of releases and pressures is crucial to define the most effective measures. The table below shows the level of achievement, based on NBB 2003, 2008 and NBB, E-PRTR 2013 data, of such SAP MED targets for the whole Mediterranean region.





Monitoring of SAP MED Targets

Based on data available, BOD5, PAH, Mercury, Lead, Zinc and Chrome showed a significant reduction of discharges into the Mediterranean Sea. However, this trend must be considered carefully as ten countries have not submitted either NBB or PRTR 2013 yet.

Loads of PCB/PCT, Hexachlorobenzene, Lindane, PCDD/PCDDF Cadmium and Copper show increasing trends unless the loads of pollutants reported in 2003 and 2008 were incomplete and had serious gaps.

The elimination of 930 tonnes in three countries under the MedPartnership was a success story in the Mediterranean. The project identified over 1,500 tons in particular in Egypt. Other Mediterranean countries report large quantities of PCB from the industrial sector (Algeria, Libya and Egypt).

The main uses of Mercury in the Mediterranean are chlor-alkali production, batteries, dental amalgams, measuring and control devices, light sources, electrical and electronic devices, mercury chemical, and other applications. Since 2003 mercury is no longer mined in the Mediterranean, however until 2003 Algeria and Spain provided roughly half of the global mercury supply (from 1990 until 2003).

In 2010, four Mediterranean countries developed a national assessment on mercury and or National mercury Plan (Algeria, Croatia, Morocco and Spain). Following the adoption of the Regional Plan on Mercury in 2012, several Mediterranean countries carried out inventories of hotspots, including chlor-alkali plants using mercury, contaminated sites as well as an analysis of the relevant regulatory framework.

Most implemented regulations by the Mediterranean countries are related to water discharges, air emissions and waste incineration. There is work ongoing for completing the regulatory framework with regards to restriction of mercury products, separate collection of mercury waste, trade of mercury and safe storage. Therefore there is a need to support implementation and enforcement of the Regional Plan.

### Key Measures under the Mediterranean Regional Plan on Mercury

1. The Parties shall prohibit the installation of new chlor-alkali plants using mercury cells with immediate effect.
2. The Parties shall prohibit the installation of vinyl chloride monomer production plants using mercury as a catalyst with immediate effect.
3. The Parties shall ensure that the releases of mercury from the activity of chlor-alkali plants shall cease by 2020 at the latest and
  - i) that the environmentally sound management of metallic mercury from the decommissioned plants is achieved, including the prohibition of its re-entry into the market;
  - ii) that the total releases of mercury (to the air, the water and to the products) from existing chlor-alkali plants are progressively reduced until their final cessation with the view not to exceed 1.0g per metric tons of installed chlorine production capacity in each plant. In doing so, the air emissions should not exceed 0.9g per metric tons of installed chlorine production capacity in each plant.
4. The Parties shall take the appropriate measures to isolate and contain the mercury containing wastes to avoid potential contamination of air, soil or water.
5. The Parties shall identify existing sites which have been historically contaminated with mercury including at least the old mines and decommissioned chlor-alkali plants, and take, with regard to these sites, environmentally sound management measures such as safety works, use restrictions or decontamination, as appropriate.
6. The Parties shall ensure that their competent authorities or appropriate bodies monitor releases of Mercury into water, air and soil to verify compliance with the requirements of the above table.
7. The Parties shall take the necessary steps to enforce the above measures.
8. The Mercury Regional Plan also provides for:
  - a) ELV of 50Microgram/l for 2015 and 5 micro litter as a target value for 2019;
  - b) ELV f 50 micro gram/Nm3 for waste incineration;
  - c) Ban of chlor-alkali mercury cells in 2020.

### (viii) POPs and Mercury Projects baseline

A number of initiatives related to POPs and Mercury have been implemented or are ongoing in the Program countries, all aimed at complying with the provisions of the Stockholm and Minamanta Conventions and supported by the GEF as financial mechanism of both Conventions. Many of them consist of enabling type activities dealing with the definition of National Implementation Plans and inventories, while the more recent ones address the issue of elimination and disposal at the national level. What proposed under the Program will preferentially address hotspots of transboundary relevance along Mediterranean coastal areas, complementing other pollution reduction activities.

Over the last 15 years, several projects have faced the POPs and mercury contamination in the region, while other are still ongoing. An analysis of the baseline projects scenarios in the Mediterranean for both POPs and mercury shows that all the GEF eligible countries in the region but Libya have had one or two national GEF funded projects between 2001 and 2013 to support the preparation, review and update of the Persistent Organic Pollutants POPs National Implementation Plan (NIPs) under the Stockholm Convention. In terms of mercury, Albania, Bosnia and Herzegovina, Montenegro, Morocco and Turkey are involved in a series of national GEF projects endorsed between 2015 and 2016 aiming at undertake an initial mercury assessment to identify the national mercury challenges, determine the national requirements and needs for becoming a Party of the Minamata Convention, and to support assessment studies to implement future obligations and extent/update the legal, policy and regulatory framework in response to the requirements of the Minamata Convention.

Looking at the former projects on POPs and mercury there were three national and one regional GEF projects in the period 2006 - 2012:

- National projects: 1) ID 3112 in Albania (2008-2010), aiming at the reduction of pesticide releases transition into environment and elimination of human health and environmental threat they pose; 2) ID 2865 in Egypt (2006-2011) which contributed to reduce and eliminate UP-POPs in key sectors of industry (cement, incineration, metallurgy and pulp and paper); and 3) ID 3082 in Morocco (2007-2009), aiming to develop and implement a PCB management plan, and to enhance the capacity of the country to manage and dispose of PCB oils and PCB containing equipment.
- Regional projects: 1) ID 1802 in Lebanon (2008-2012), which aimed to demonstrating and promoting best techniques and practices for reducing health-care waste to avoid environmental releases of dioxins and mercury



At the actual stage there are eleven GEF ongoing projects in the Mediterranean dealing with POPs and mercury: nine at national level and two at regional level.

- National projects: 1) ID 4392 in Egypt, endorsed in 2014, whose goal is to reduce unintentional releases of POPs originating from incineration and open burning of health care- and electronic-waste; 2) ID 3905 in Egypt, endorsed in 2014, aiming to improve the management and disposal of targeted stockpiles of obsolete pesticides and PCBs, in an environmentally sound manner; 3) ID 4108 in Lebanon, endorsed in 2014, aiming to dispose of high risk PCBs in the power sector in an environmentally sound manner; 4) ID 9045 in Montenegro, endorsed in 2015, which aims to implement the environmentally sound management of PCBs ensured with the disposal or decontamination of PCBs contaminated equipment and soils in the country; 5) ID 4738 in Morocco, endorsed in 2014, whose goal is to reduce POPs releases from obsolete pesticide stockpiles and contaminated sites and strengthen the capacity for the sound management of pesticides; 6) ID 3678 in Syria, approved in 2009, which aims to achieve an environmental improvement through the elimination of POPs and other obsolete pesticide stockpiles and capacity building for better life cycle management of pesticides; 7) ID 2995 in Tunisia, approved in 2010, to reduce releases of dioxins, furans and PCBs by strengthening the country's legal and institutional framework and by establishing sound and sustainable management programs for improving management and final disposal of healthcare wastes and PCBs; 8) ID 8000 in Tunisia which aims to contribute to the reduction of negative mercury impacts on human health and the environment; and 9) ID 4601 in Turkey, endorsed in 2014, aiming at the protection of health and environment through elimination of current POPs legacies, ensure longer term capacity to manage POPs into the future consistent with international practice and standards, and integrate POPs activities with national sound chemicals management initiatives.
- Regional projects: 1) ID 4886, endorsed in 2014, in Egypt, Morocco and Tunisia and other 11 countries in the African continent, which aims to strengthen the capacity for implementation of the updated POPs Global Monitoring Plan (GMP) and to create the conditions for sustainable monitoring of POPs in the African Region; and 2), ID 2770, approved in 2010, in Morocco and other 12 countries in the African region, aiming to reduce environmental and human health risks from PCBs releases through the introduction of cost-effective environmentally sound management (ESM) to PCB oils, equipment and wastes held by electrical utilities in participating countries of the region.

The UfM is leading the Horizon 2020 (H2020) initiative to depollute the Mediterranean Sea. The leaders of the UfM countries agreed to increase efforts to substantially reduce the pollution of the Mediterranean by 2020 at the 10th Anniversary Euro-Mediterranean Summit in Barcelona in 2005. The Horizon 2020 Initiative tackles the sources of pollution that are said to account for around 80% of the overall pollution of the Mediterranean Sea, those are municipal waste, urban waste water and industrial pollution, among them POPs and Mercury. The EC established several specific programmes to support the H2020 Initiative, one of them being the Mediterranean Hot Spots Investment Programme – Project Preparation and Implementation Facility - MeHSIP-PPIF (ended in 2014), and its second phase launched in 2015. MeHSIP-PPIF and MEHSIP II aim to support the Horizon 2020 Investments for Pollution Reduction and Prevention component. This is mainly being achieved through providing project development support to infrastructure investment projects. The projects derive mainly from the so called "hotspots" as identified under the National Action Plan (NAP) exercise that was coordinated by UNEP/MAP and can target the reduction and disposal of POPs and Mercury. MEHSIP II is fully integrated with the MedProgramme through the participation of the European Investment Bank in the component 1 of the programme.

H2020 is also supporting several regional projects such as SWITCH-Med which aims to assist 10 countries of the southern Mediterranean to develop and implement policies to SWITCH to sustainable pattern of consumption and production (SCP) promoting it among consumers, small and medium-sized enterprises and Mediterranean policy-makers. SWITCH-Med is being implemented through collaborative efforts by the EU, UNIDO, UNEP/MAP-Sustainable Consumption and Production Centre (SCP/RAC) and UNEP-DTIE. All European Neighbourhood countries will be beneficiaries. The integration with this project and the MedProgramme is fully ensured by the participation of MAP SCP/RAC to the project.

(ix) Loss of Biodiversity

SAP-BIO for the conservation of biological diversity was evaluated broadly in 2013<sup>16</sup>. The SAP BIO includes 63 national action plans (NAPs) and 30 regional priority actions, which were only partially met, but full implementation requires additional resources and capacity at the national level. The MedPartnership in particular supported the need to establish and more effectively manage MPAs with the support of SPA/RAC, WWF-MedPO and with actions also coordinated by the MedPAN association.

The MedPartnership was instrumental in the achievement of several results both at regional and national level. At regional level, the project supported, among others, the preparation of a draft Roadmap to achieve Aichi Target 11 in the Mediterranean region, prefigured during the 2012 Mediterranean MPA Forum in Antalya to serve as guidance for all Mediterranean countries to strengthen marine environment conservation and management. At national level, 24 priority areas of conservation interest were identified, listed and ecologically assessed for the creation of national MPA networks in Croatia, Lebanon, Morocco and Montenegro; 4 new MPAs in Albania, Algeria, Morocco and Tunisia were provided with ecological, socioeconomic studies and management plans; while the management plans of 8 MPAs in Algeria, Croatia, Tunisia and Turkey were updated. However, despite the efforts deployed in the context of the MedPartnership project, the Mediterranean system of MPAs is still suffering from significant weaknesses, primarily the lack of effective management and sustainable financing as well as effective coordination among its stakeholders.

Libya is a Mediterranean country in which the coastline extends over 1,970 km with important portions that are still in very good natural condition. In early 2011, based on the results of SPA/RAC, WWF-MedPO and IUCN Med field, surveys were undertaken in the Ain Al-Ghazala area. Following this survey, the Libyan Ministry of Agriculture, Animal and Marine Wealth declared the Ain Al-Ghazala coastal lagoon and its facing Elba Island as a Marine Protected Area (Decision N° 2\_Year 2011 of 17 January 2011). In 2013-2014, and in order to overcome the legal and institutional gap regarding protected areas in Libya, SPA/RAC collaborated with the Libyan Environment General Authority (EGA) in order to elaborate a draft Law on Protected Areas and a draft National Strategy for MPAs.

Since 2000, SPA/RAC assisted the Libyan Environment General Authority (EGA) in the elaboration of National Action Plans (NAPs) related to marine turtles, cetaceans and seabirds, as well as in the running of several field works and trainings along the coastline of Libya to collect data on marine turtles (mainly nesting sites), seabirds, and monk seal critical habitats.

The lesson learned from MedPartnership is that to move MPAs from a dormant state to an operational state and ensuring the fundamental conditions for the long-term sustainability, several barriers have to be overcome:

- Capacity building. Challenges relate mainly to the number of countries involved, the wide diversity in their MPA management capacities and development status, in their diverse institutional and management frameworks, and most of all, in the varying backgrounds, levels of interest and commitment of their MPA practitioners.
- Stakeholder participation. Most of the countries in the south and east of the Mediterranean are not used to set up and facilitate participatory processes. Practitioners from these countries, more often than not, lack the skills and capacities to bring all stakeholders together, build trust, manage confrontations and resolve conflicts.
- Governance. The establishment of an effective governance with well recognized authority (either through a steering committee or other advisory bodies) is needed for the advancement of the MPA planning and management processes.
- Management. Although significant improvements towards management effectiveness have been made, the Mediterranean MPAs are still far from achieving an optimal state, including delivering ecological, social and economic benefits.
- Sustainable sources of funding.

In order to achieve the Aichi Targets in the Mediterranean, stronger political commitment as well as greater cooperation and new governance approaches are needed.

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<sup>16</sup> SAP BIO implementation: The first decade and way forward (as reviewed by the National Correspondents of SAP BIO) UNEP (DEPI)/MED WG. 382/5 July 2013

(x) *Monitoring and information management*

Since the 2005 Mediterranean TDA, the situation in the Mediterranean in terms of transboundary issues in the marine and coastal areas has evolved. In terms of major assessments, in addition to the evaluation of the Barcelona Convention SAPs and NAPs, and the revision of the pollution from land-based sources NAPS, there have been several key assessments undertaken by UNEP/MAP, EC, EEA and other partners. These include: the initial integrated assessment of the Mediterranean sea (2011); The State of the Mediterranean Marine and Coastal Environment (2012); the EEA/UNEP/MAP report on the implementation of H2020 to de-pollute the Mediterranean by 2020 (2014); and the MedTrends 2015 Report<sup>17</sup>. Over 100 technical reports were produced during the lifespan of the MedPartnership project on various issues from pollution, MPA's, Aquifers, MPA's and fisheries. In addition the EC and others have been financing a sizable number of marine related research projects in the last decade, with many projects in recent years also attempting to bring together science and policymaking. For example since 2010, the EC has invested 200 million Euros in its Oceans of Tomorrow projects.

In terms of monitoring, the adoption in 2008 of the EU Marine Strategic Framework Directive (MSFD) led to European countries developing monitoring plans based on a set of detailed common criteria and indicators to implement the Marine Directive. UNEP/MAP initiated the Ecosystem Approach in 2008, which led to the adoption of 11 Ecological Objectives, 61 indicators and definition of GES and targets in 2012 at the Barcelona Convention COP17. This work has been continued in depth with national experts which led to the Integrated Monitoring and Assessment Programme (IMAP) for the Mediterranean, which was adopted in 2016 at the Barcelona Convention COP19. Now the challenge is for countries, especially the non-EU countries to redesign their national monitoring programmes in line with IMAP and the 23 common indicators which also cover the areas beyond national jurisdiction. Regarding pollution monitoring countries will build upon their MED POL monitoring programme and database that has been in existence since 1999, with agreed parameters and stations in key hotspots and coastal areas. However, very little data exists for the majority of the common indicators, other than some contaminants, nutrients and chlorophyll data, particularly in the GEF eligible countries of the Mediterranean.

Regarding databases, a number of new data platforms have been established in Europe. This includes Copernicus<sup>18</sup> Marine on satellite data and EMODnet<sup>19</sup> on monitoring and research data and THE MEDLEM (MEDiterranean Large Elasmobranchs Monitoring) PROGRAM and database application<sup>20</sup>. In the Mediterranean the main UNEP/MAP portals include the MED POL Infosystem, a Mediterranean Integrated Geographical Information System on Marine Pollution Risk Assessment and Response<sup>21</sup>, the SPA/RAC Mediterranean Database of Cetacean Stranding (MEDACES)<sup>22</sup>, its Mediterranean Invasive Alien Species (MAMIAS) database, a SPA/RAC and MedPAN database on Marine Protected Area<sup>23</sup> and a Mediterranean portal on Climate Adaptation and ICZM<sup>24</sup> and the Pegaso Geoportal on ICZM<sup>25</sup>. Finally UNEP/MAP's Regional Activity Centre for Information and Communication (INFO/RAC) will support coordination towards the establishment of an umbrella Info/Map system.

In spite of these developments, there are still some fundamental needs in particular for the GEF eligible countries of the Mediterranean that have not been addressed. Major issues include:

- Countries have strongly requested financial and technical support in the development and implementation of revised monitoring programmes, for the marine and coastal environment, including offshore monitoring, climate change and emerging priority issues. Current data availability in the majority of countries is scarce and scattered.

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<sup>17</sup> See <http://www.medtrends.org/medtrends.php>

<sup>18</sup> See <http://marine.copernicus.eu>

<sup>19</sup> See <http://www.emodnet.eu>

<sup>20</sup> See [http://www.arpat.toscana.it/temi-ambientali/acqua/acque-marine-e-costiere/medlem/pr\\_medlem\\_en.html](http://www.arpat.toscana.it/temi-ambientali/acqua/acque-marine-e-costiere/medlem/pr_medlem_en.html)

<sup>21</sup> See <http://medgismar.rempec.org>

<sup>22</sup> See [http://medaces.uv.es/home\\_eng.htm](http://medaces.uv.es/home_eng.htm)

<sup>23</sup> See <http://www.mapamed.org>

<sup>24</sup> See <http://medicip.grid.unep.ch>

<sup>25</sup> See <http://pegasosdi.uab.es/geoportal>

- There is a strong need to integrate existing national and regional databases, not towards the creation of new platforms but to look towards systems of sharing data, and making it publicly available, through for example Spatial Data Infrastructure (SDI). Barriers include many national databases that are in the national language and need translation, and the need for data agreements agreed with all participating countries, and potentially also a data sharing decision to be adopted by the Barcelona Convention Contracting Parties.
- A need to further elaborate a set of common indicators, including ecosystem approach based indicators to assess drivers, pressures and responses within a framework for a revised TDA coupled with 2019 SoEr.

Without a strong and quality assured monitoring programme in the Mediterranean coastal and offshore waters, it is not possible to measure the impact and change resulting from the implementation of projects, policy reforms, capacity building and investment, including those proposed under the MedProgramme. The Mediterranean is a complex ecosystem with many pressures, therefore understanding the relationship between pressures and state requires a coherent, coordinated and comparable monitoring systems, indicators of pressures, drivers and response. This has also to in line with the new Sustainable Development Goals, future assessments, and state of environment reports which are more quantitative rather than qualitative, so as to assess which actions are the most cost-effective and sustainable solutions.

**C) THE PROPOSED ALTERNATIVE SCENARIO, GEF FOCAL AREA STRATEGIES, WITH A BRIEF DESCRIPTION OF EXPECTED OUTCOMES AND COMPONENTS OF THE PROGRAMME.**



The MedPartnership and ClimVar & ICZM GEF projects have enriched the knowledge on the Mediterranean environment and unraveled the implications of climate change and variability; strengthened countries' mutual trust, cooperation and common purpose; consolidated the partnership among countries, UN bodies, CSOs, bilateral donors and the EU; tested on the ground the feasibility and effectiveness of technical and policy instruments aimed at addressing major present and future threats to environmental sustainability and climate related impacts.

Alongside and thanks to these GEF funded support actions, UNEP/MAP, at the request of the Contracting Parties to the Barcelona Convention, has developed a comprehensive regional policy framework including strategies, plans and guidelines that will serve as guidance for the regional and national efforts in the Mediterranean for the years to come.

The NAPs update and preparation process succeeded in creating a momentum at local, national and regional levels, with a remarkable level of involvement and participation of all stakeholders. In each country, national and local authorities, the industrial sector and NGOs discussed priorities, possible actions and opportunities for investment thus making NAPs a realistic initiative.

These remarkable achievements, while not yet bringing about measurable changes in the levels of environmental stress or in degradation trends, have however created the indispensable foundation and the enabling conditions for initiating national actions targeting major causes of marine and coastal transboundary degradation. The task is now to confront the challenge of implementation, thereby achieving concrete and lasting results.

### **Mediterranean Sea Programme (MedProgramme): Enhancing Environmental Security**

The stage of assessments, diagnostics, priority setting, planning and experimentation having been completed, a higher level of effort is now required at the national and regional levels. This renewed and expanded effort is not only justified by the continuing degradation of the Mediterranean coastal zone and shallow marine environments, but also urgent in view of the looming climate related threats, and of the loss of livelihoods and dramatic deterioration of social conditions along critical sections of the Southern and Eastern Mediterranean shores.

Further GEF support is now being sought through a Programmatic Approach to assist GEF beneficiary countries of the Mediterranean Basin to rise to this challenge and step up their efforts and commitments, including those financially related. The Programmatic Approach funding modality is very well suited to provide for the necessary involvement of multiple GEF focal areas, to leverage broader partnerships and funding, and to create the momentum and critical mass that will sustain countries' action for the long term. Actions will have to reflect regionally and nationally agreed upon priorities and strategies, and address identified Mediterranean hotspots. They will be developed within a coordinated framework of effective transboundary cooperation, Mediterranean wide harmonized standards, indicators and monitoring procedures, information flow and exchanges of experience, and with the support of relevant regional bodies and an expanded partnership of agencies and donors.

#### **Political Context**

The term “environmental security”, used in the title of the proposed Programme to capture its overall perspective and goal, embraces three categories of concerns:

- Concerns about the adverse impact of human activities on the environment - the emphasis here is on the security of the environment as a good in itself, for the sake of future generations, as the context for human life.
- Concerns about the direct and indirect effects on national and regional security of various forms of environmental change (especially water scarcity and degradation), which may be natural or human-generated - here the focus is on environmental change triggering, intensifying or generating the forms of conflict and instability relevant to conventional security.
- Concerns about the insecurity that individuals and groups (from small communities to humankind) may experience due to environmental change such as water scarcity, air pollution, climate variability and change.

The current situation of the Southern and Eastern shores of the Mediterranean shows all the signs of progressive deterioration of environmental security as a consequence of complex and interlinked factors. Among them, the loss and degradation of coastal and shallow marine ecosystems and of the scarce freshwater resources, compounded by the increasing negative impacts of climate variability and change, play an important role in determining social instability and political volatility.

The presumption underlying the Programme design is that overall environmental security, the sustainability of the livelihoods of growing coastal populations and their resilience to the adverse impacts of climate change and variability will be improved by addressing hot spots of coastal/marine pollution and habitat degradation, implementing ICZM and nexus planning, introducing conjunctive surface and groundwater management, protecting coastal groundwater related ecosystems and coastal/marine biodiversity.

## The Programme's Theory of Change

The design of the proposed Programme assumes that by launching a stimulus package of multiple focal area investments and interventions addressing priority concerns and hot spots, this added impetus will jump start the systematic implementation of protection and mitigation measures. In order to have a significant impact in reversing degradation trends affecting the Mediterranean Sea and its coastal areas and enhance resilience to climatic impacts, the Programme was designed following a theory of change that would address key issues across the complex set of drivers of environmental degradation and barriers for the sustainable use of coastal and marine resources. This theory of change reflects lessons learned from MedPartnership and other programmes, and prioritizes investments in areas where the countries agree that interventions are needed.

The Programme's Theory of Change focuses on four main objectives:

- Reduce land-based coastal and marine pollution from harmful chemicals and wastes, and nutrients;
- Restore and stabilize coastal zone freshwater resources, habitats and ecosystem functions;
- Build coastal resilience to the expected impacts climate change and variability with focus on key strategic resources (coastal aquifers, wetlands);
- Consolidate biodiversity protection frameworks.

The Theory builds on the notion that if hazardous chemical pollution and wastes production hotspots are eliminated and sustainable production and consumption practices adopted systematically; if the freshwater resource base of coastal zones is protected and increased through the reuse of treated wastewaters; if priority coastal aquifers are sustainably managed and/or protected from seawater intrusion (e.g.: by artificial recharge schemes); if land uses in priority coastal zones are regulated respecting their intrinsic vulnerabilities and natural characteristics including coastal environmental and geological processes; if the sustainability of the achievements so far in biodiversity conservation is strengthened; if transboundary cooperation will ensure harmonization of policies and of monitoring procedures, the coastal populations along the southern and eastern Mediterranean shores will benefit from improved health conditions, more stable livelihoods, gender equality and enhanced resilience to climatic change and variability.

A sustainable Mediterranean environment requires investments to address the national agenda as well as regional issues. The theory of change helped define the priority interventions at the national level and regional levels. At the national level, the Programme will support the reduction of harmful chemicals and nutrients pollution hotspots, the consolidation of an integrated marine and coastal protected areas system, the adoption of comprehensive ICZM policies respectful of the natural capabilities and functions of the coastal zone, the enhancement of water security and climate resilience. At the regional level, the Programme will support harmonized monitoring, regional cooperation, learning among all stakeholders, and the formal adoption of Mediterranean wide environmental standards on wastewater, sludge, reuse, desalination and aquaculture.

## The Global Environmental Objectives of the Programme are:

- restore the integrity of a globally significant transboundary large marine ecosystem and of its coastal areas through multi-country cooperative actions;
- prevent the exposure of humans and the environment to harmful chemicals and waste of global importance;
- maintain globally significant biodiversity and the ecosystem goods and services that it provides to society;
- increase resilience to the adverse impacts of climate change in vulnerable developing countries.

## The key outcomes /performance indicators for the Programme are:

- number of transboundary coastal freshwater basins/aquifers with enhanced collective management and increased water security through conjunctive management of surface and groundwater;
- hectares of additional marine and coastal regions under effective management;
- number of tons of POPs/PCBs disposed of (directly and indirectly);
- number of tons of Mercury reduced (directly or indirectly).

### The Baseline

The MedPartnership and ClimVar & ICZM GEF projects have enriched the knowledge on the Mediterranean environment and unraveled the implications of climate change and variability; strengthened countries' mutual trust, cooperation and common purpose; consolidated the partnership among countries, UN bodies, CSOs, bilateral donors and the EU

UNEP MAP developed a comprehensive regional policy framework including strategies, plans and guidelines that will serve as guidance for the regional and national efforts in the Mediterranean for the years to come.

The NAPs have been updated by countries with a high level of involvement and participation of all stakeholders thus making NAPs a realistic initiative.

### MEDITERRANEAN SEA PROGRAM – THEORY OF CHANGE: FROM OUTCOMES TO IMPACTS

**Long Term Expected Impacts:** The coastal populations along the Southern and Eastern Mediterranean shores benefit from improved health conditions, more stable livelihoods, and enhanced resilience to climatic change and variability.

**Near Term Expected Impact:** Increased countries' commitments and impetus added by the Program will jump start the systematic implementation of adaptation and mitigation measures in project countries.

**Intermediate State:** Countries independently engage in replication of practices and policies, and commit to investments. Cooperation agencies and IFIs adopt and mainstream approaches and solutions promoted by the Program.

**Assumption:** Countries, convinced of the concrete effectiveness of Program's approaches, and of the environmental and social benefits to be derived from them commit to relevant reforms and investments.

**Drivers:** Recognition by countries of need to manage and protect coastal and marine resources. Binding commitments reached at the global and regional levels. Well established transboundary cooperation frameworks. Regional cooperation providing incentives and support structure.

**Outcome:** Created the momentum and the critical mass of interventions needed to trigger and sustain countries' action

**Outputs:** (In selected hotspots and priority areas)

Reduced land based coastal and marine pollution from harmful chemicals and wastes, and nutrients;

Restored and stabilized coastal zone freshwater resources, habitats and ecosystem functions

Consolidated biodiversity protection frameworks

Built resilience to the expected impacts climate change and variability with focus on key strategic resources

### FROM OUTCOMES TO IMPACTS

## D) DESCRIPTION OF THE COMPONENTS AND EXPECTED OUTCOMES.

In addition to address two SAPs and the NAPs the structure of the MedProgramme fully reflects the priorities adopted by the Contracting Parties to the Barcelona Convention in the UNEP/MAP 2016-2021 Mid Terms Strategy as well as other instruments approved by the countries, such as the Mediterranean Strategy for Sustainable Development 2016-2025 (MSSD). Moreover the Programme contributes to several subprogrammes of the UNEP PoW, namely:

1.Climate change, 3. Ecosystem management, 4. Environmental governance, 5. Chemicals and waste and 7. Environment under review.

The MedProgramme will target coastal nutrient pollution hotspots, harmful chemical and wastes, critical coastal habitats and freshwater resources, climate resilience, marine protected areas, and monitoring of progress to impacts and coordination among Child Projects. It will be developed through four Components and seven Child Projects. The table below provide a summary of the structure and setup of the MedProgramme. A detailed description of each component follows.

Child Project	Component	Outcomes									GEF
		1	2	3	4	5	6	7	8	9	
CP 1.1	Component 1										IW CW
CP 1.2											IW CW
CP 1.3											IW CW
CP 2.1	Component 2										IW
CP 2.2											IW
CP 3.1	Component 3										BD (Libya)
CP 4.1	Component 4										IW CW



## **Component 1: Reduction of Land Based Pollution in Priority Coastal Hotspots, and Measuring Progress to Impacts (Child Projects: 1.1, 1.2 and 1.3)**

This Component will focus on Mediterranean transboundary pollution hotspots to address (i) threats to the health of humans and of marine and coastal ecosystem posed by exposure to persistent toxic substances (POPs, Mercury); (ii) industrial wastes, excess nutrients from discharges of untreated urban and industrial wastewater; and (iii) the monitoring of progress towards expected impacts, and achievement of relevant SDGs.

The Component's design consists of national investments blended with complementary regional technical assistance and policy interventions aimed at allowing the monitoring of the progress to impacts, and at consolidating results at regional level across the Mediterranean. It will target two outcomes and will be developed through three Child Projects (CP) implemented/executed by UNEP/MAP, EBRD<sup>26</sup>, UNIDO and EIB. GEF IW and CW grant funding will support this Component.

### National Level:

- ✓ Reaching a significant reduction in the production, use, consumption and emissions/releases of targeted chemicals and wastes (POPs, Mercury) through disposal of wastes and stockpiles, the adoption of sustainable production and consumption practices, investments in innovative techniques, and regulatory approaches. The Component will build and expand – amongst others – the MedPartnership successfully tested PCBs disposal and management capacity building methods. This includes reduction of mercury emissions and the introduction of frameworks for the environmentally sound management of mercury-containing wastes, taking into account any relevant guidelines developed under the Basel Convention (CP 1.1, 1.2 and 1.3).
- ✓ Demonstrating the cost-effectiveness of innovative infrastructural investments involving wastewater and sludge reuse, managed aquifer recharge, and nutrient and other pollution reduction in selected priority coastal areas (CP 1.2).
- ✓ Through private/public investments, introducing technologies for land as well as river / lake / maritime pollution reduction, enhancement of water security, ecosystems health and climate resilience in inland and coastal regions and improved water management systems (CP 1.3).

### Regional Level:

- ✓ Updating the baseline situation (TDA) after over 10 years from the previous diagnostic, fully integrating the findings of the Climate Change and Variability project, the Coastal Aquifer Supplement and Action Plan, and other relevant findings and results of MedPartnership, and including a gender assessment, combined with a State of the Environment Report for the Mediterranean; as well as exploring the potential for systemic and transformational change at the horizon 2050 through cross-sectoral foresight scenarios (CP 1.1).
- ✓ Promoting the integration and harmonization of presently existing data platforms, monitoring protocols and indicators, in compliance with the newly established Integrated Monitoring and Assessment Programme for the Mediterranean (IMAP, 2016), and defining rationale and sites for offshore reference monitoring stations. Issues include pollution from harmful chemicals and wastes, nutrients, marine litter and microplastics, marine noise and climate change adaptation, marine and coastal biodiversity, offshore activities and management, coastal zones and freshwater resources, fisheries, and gender (CP 1.1).
- ✓ Defining and promoting the formal adoption by the Parties to the Barcelona Convention of regional standards on wastewater/sludge reuse, desalination, aquaculture (CP 1.1 and 1.2).

### Expected Outcomes:

- In coastal hot spots and catchment areas, measurable reduction of harmful chemicals and wastes (POPs, Mercury) and of excess nutrients impacting human health and coastal habitats, achieved. • Reduced loss of coastal habitats and eutrophication, and improved climate resilience, water security and human health in hotspots and selected priority coastal and catchments areas.

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<sup>26</sup> The Executing Agency or agencies for Child Project 1.3 will be identified following a competitive bidding process in coherency with international and EBRDs procurement rules, as relevant and dependent on the financial instruments that are being proposed.



- Private/public investments enable pollution reduction in priority coastal and catchments areas through the improvement of water and waste water management systems and the introduction of modern and efficient technologies and practices.
- Littoral countries enabled to identify trends and progress to impacts.

#### Indicators:

- Amount and type of POPs eliminated or reduced.
- Amount of mercury reduced and disposed.
- WWTP extension and upgrade including treated wastewater reuse/reinjection and depollution of catchment areas in priority coastal hotspots.
- Common regional standards on wastewater and sludge management and reuse, developed.
- Volume of wastewater treated in private/public systems.
- Volume of recycled water in private/public systems returned to supply.
- Number of private/public water system clients connected to modern wastewater facilities.
- Updated baseline (TDA), including gender assessment.
- Report on progress to impacts.
- Number of additional sites for offshore stations.
- Proposal for a data sharing regional policy, developed.

#### Consistency with regional and national priorities, guidelines, and binding agreements:

The Component will draw guidance, comply with and respond to a number of regional/national priority setting and guiding frameworks. Among them in particular:

- Mediterranean Strategic Action Program on Land Based Pollution.
- Stockholm Convention and NIPs, Basel Convention, Minamata Convention.
- Mediterranean Strategy on Sustainable Development 2016-2025.
- 10 regional Plans on Mercury, POPs, Marine Litter, WW and Food sector.
- Regional Action Plan on Sustainable Consumption and Production in the Mediterranean.
- Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas.
- Updated National Action Plans (NAPs), Containing Measures and Timetables for their Implementation.
- Guidelines on Best Environmental Practices (BEP) for the Environmental Sound Management (ESM) of Mercury Contaminated Sites, PCB, Lube Oils and Lead Batteries.
- The Integrated Monitoring and Assessment Programme for the Mediterranean (IMAP).

### **Component 2: Enhancing Sustainability and Climate Resilience in the Coastal Zone (Child Projects: 2.1 and 2.2)**

This Component will target three outcomes and includes two Child Projects (CP 2.1 and 2.2) implemented and executed by UNEP/MAP, UNESCO-IHP, GWP Med, and will be supported by GEF IW grant funding. The Component will address the management of Mediterranean coastal zones, where the most pressing climate related and sustainability concerns are concentrated, and where most marine degradation originates.

Its purpose is to assist countries, coastal zone managers and populations to adapt to evolving climatic conditions threatening sustained freshwater supply, and to introduce land use policies and development practices respectful of the intrinsic vulnerabilities, gender equality, natural and cultural functions, freshwater-seawater interactions, and geological processes characterizing the diverse Mediterranean coastal zones: from karstic, to flood plain, to fluvial-deltaic, to barrier-strandplain.

The Component will apply the tools and the approaches developed by MedPartnership in response to critical environmental and socio-economic situations related to (i) widespread salinization and degradation of coastal aquifers - strategic freshwater resources sustaining coastal populations and habitats – due to over-exploitation, pollution from inadequate land use practices, seawater intrusion, and climatic extremes; (ii) loss of ecosystem services provided by major coastal wetlands, lagoons and humid zones due to anthropogenic alterations of the seawater-freshwater

interface, excess sedimentation, eutrophication with consequent deterioration of local livelihoods, biodiversity and of the shallow marine environment; (iii) disruption of coastal zone natural processes due to coastal urbanization and other human activities and changing climatic conditions with consequent erosion, diminished groundwater recharge, loss of resources. The component will uptake the lessons learnt from the GEF MFA MENARID projects (i.e. lessons learnt from aquifers recharge techniques).

It will do so through the systematic provision to all programme countries of technical management tools necessary to enhance the effectiveness of ICZM, with a special focus on coastal freshwater ecosystem integrity, water security of coastal populations, biodiversity protection, rational use of coastal lands and seascapes, on promotion of diversified and climate resilient coastal development and gender equality.

In selected priority coastal areas, using the water-food-energy-ecosystems Nexus (a.k.a Nexus) approach, the Component will seek to (i) understand the interlinkages among the Nexus sectors (ii) integrate – to the extent possible - strategies and management options and identify solutions, as means to address issues of priority in coastal areas of importance, fostering water-food-energy security, reduction of land based nutrient pollution and other pressures, protection of coastal habitats and biodiversity and climate change resilience. The set of actions leading to the outcomes listed below will feed a regional policy dialogue supported by the project under the auspices of the Barcelona Convention and/or the Union for the Mediterranean (UfM). This will facilitate the Nexus approach being adopted at the Mediterranean level as part of the institutional framework of either of the two aforementioned political processes (related decisions should be taken by the member countries), as means to: (a) sustaining and upscaling the outcomes of the intervention; (b) matching the global nexus related efforts of the European Commission.

#### Expected Outcomes:

- Coastal zone sustainability enhanced through the adoption of comprehensive national ICZM strategies, coastal plans and instruments, and the introduction of sustainable consumption and production (SCP) technical, regulatory, economic and market-oriented measures and improving gender equality.
- Increased resilience to climatic variability and change, and enhanced water security of coastal populations through improved sustainability of services provided by coastal aquifers and by groundwater related coastal habitats.
- Balancing of competing water uses improved through water, food, energy and ecosystems integrated governance

#### Indicators:

- Number of hectares of landscapes and seascapes under improved management.
- Number of countries implementing comprehensive ICZM and SCP approaches, including Coastal Zone Use-Capability mapping.
- Number of persons, reflecting gender balance, trained on integrated approaches, ICZM, MSP, and adaptation to climate variability and change.
- Number of persons, involved in awareness raising activities.
- Number of priority coastal aquifers and related habitats under improved conjunctive surface and groundwater management.
- Number of countries where nation-wide dialogue on conjunctive surface and groundwater management solutions have been initiated.
- Number of national inventories of submarine groundwater discharges (SGD).
- Number of priority coastal areas that develop Nexus assessments and endorse a Nexus Strategy/ Action Plan.
- Number of transboundary basins and aquifers in which cooperation is enhanced.
- Number of bankable projects for priority interventions and investments.

#### Consistency with regional and national priorities, guidelines, and binding agreements:

The Component will draw guidance, comply with and respond to a number of regional/national priority setting and guiding frameworks. Among them in particular:

- The ICZM Protocol to the Barcelona Convention.
- Action Plan for the implementation of the ICZM Protocol, 2012-2019.
- Regional Action Plan on Sustainable Consumption and Production in the Mediterranean.
- Regional Climate Change Adaptation Framework for the Mediterranean Marine and Coastal Areas.
- Updated National Action Plans (NAPs), containing measures and timetables for their Implementation.
- Sub-Regional Action Plans on Coastal Aquifers.
- The Ramsar Convention.

### **Component 3: Protecting Marine Biodiversity (Child Project: 3.1)**

This Component will address the capacity barriers that hinder the sustainability and effectiveness of the MPAs network in a country of the Southern Mediterranean (i.e. Libya). The CP3.1 under this component will aim at the development of the network of MPAs (number of sites and surface) through the establishment of MPA management support mechanisms in priority MPAs. These include: (i) the assessment of the legal and institutional mechanisms for MPAs; (ii) the collection centralization of data on marine biodiversity and ecosystems (national platform); (iii) communication and awareness about MPAs and marine biodiversity and ecosystems; and (iv) the testing and adoption of permanent solutions including Sustainable Consumption and Production (SCP) to strengthen the sustainability and effectiveness of the MPAs. In particular, the specific work in Libya will be focus on advancing Ain-El-Ghazelah and Farwa Lagoon MPAs towards a phase of operational sufficiency by building the capacity of MPA practitioners, developing the management plan through a step-by-step participatory planning process to ensure the effective protection of ecological and socioeconomic values of the areas.

#### Expected Outcome:

- Expansion of seascapes under protection in Libya, and improved protected area management through the implementation of the Libyan Marine Protected Areas (MPA) National Strategy, mapping of marine key habitats, monitoring of marine megafauna (mammals, seabirds, turtles and cartilaginous fishes), capacity support mechanisms and adoption of permanent solutions.

#### Indicators:

- Number of additional hectares of marine protected areas in Libya.
- Number of additional marine protected areas in Libya having management plans.
- Number of MPAs that developed strategies to strengthen the sustainability and effectiveness of the MPAs.
- Number of sites covered by marine megafauna monitoring programmes.
- Number of monitoring networks of marine key habitats.
- Number of training sessions to Libyan nationals (reflecting gender balance) on MPA networks planning and management, marine key habitats mapping and marine megafauna monitoring.

#### Consistency with regional and national priorities, guidelines, and binding agreements:

The Component will draw guidance, comply with and respond to a number of regional/national priority setting and guiding frameworks. Among them in particular:

- The Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean.
- Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAP-BIO) and related NAPs.
- Strategic Plan for Biodiversity 2011-2020 and the Aichi Targets, Convention on Biological Diversity.
- Mediterranean Strategy for Sustainable Development 2016-2025.
- Roadmap for a Comprehensive Coherent Network of Well-Managed MPAs to achieve Aichi Target 11 in the Mediterranean.
- Regional Working Programme for the Coastal and Marine Protected Areas in the Mediterranean including the High Sea.
- 8 Regional Action Plans and 1 Regional Strategy for the conservation of endangered or threatened species and their habitats; 1 Action Plan on Species Introductions and Invasive Species.
- Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast (IMAP).

- Regional Action Plan on Sustainable Consumption and Production in the Mediterranean.
- The Ramsar Convention.
- The Aarhus convention on access to information, public participation in decision-making and access to justice environmental matters.

#### **Component 4: Knowledge Management and Programme Coordination (Child Project: 4.1)**

This Component will include one Child Project (CP 4.1) implemented and executed by UNEP/MAP that will work regionally in coordination with all the co-executing partners to the programme. The component will target 2 outcomes and aim to:

- Ensure the effective coordination and learning among all Child Projects, consistency with the Programme objectives, and synergies among projects and partners;
- Monitor and disseminate throughout the region the Programme's progress towards impacts in climate resilience, land based pollution reduction, and coastal resources sustainability which take into consideration gender equality and woman empowerment;
- Raise regional and global awareness on the MedProgramme and its objectives and accomplishments;
- Ensure coordination and synergy with the existing and relevant initiatives ongoing in the region (Supported by the EU, UfM, etc.);
- Ensure full consistency with IWLEARN.

The component will complement the national projects, maximize the effectiveness of the overall Programme and provide opportunities for south-south learning, foster intergovernmental cooperation, use of M&E tools and geospatial services, apply best practices and develop portfolio-wide training and communication strategies. The component will allow coordination and synergy with the existing and relevant initiatives ongoing in the region like the recently approved ENPI-SEIS II and Sustainable Water Integrated Management – Horizon 2020 Support Mechanism (SWIM-H2020 SM) EU projects. This component will also ensure full cooperation and synergy with the IWLEARN allocating 1% of the total IW PFD grant to ensure: 1) participation in the IWCs and other relevant GEF initiatives, 2) the development of a website aligned with the GEF and IWLEARN standard and experiences; and (3) formulation of experience notes, 4) any other requirements to ensure full consistency with IWLEARN. The component will share best practices and facilitate dialogue regarding exchange of relevant datasets with the GEF/UNEP project titled "Towards an International Nutrient Management System" (GEF ID 5400) and other relevant global regional and national projects.

The component will also develop the overarching Programme's Communication and Outreach strategy. The strategy will be developed in a participative process with the countries, the executing partners and the implementing agencies during inception phase of the project. It will take into account the effective dissemination of the results on both regional and national level. The Programme's Communication and Outreach strategy will fully benefit from the extended regional network and communication strategies of UNEP/MAP, its Regional Activity Centers under the Barcelona Convention and in the region, including the participation of UNEP/MAP, EIB, EBRD and GWP-Med in several EC and UfM lead initiatives which are targeting the environment, planning and finance Ministries. Moreover, through the dissemination of its results, the MedProgramme will support the reinforcement of the ongoing regional initiatives (such as H2020) aiming at proving a long term sustainable financial strategy for future SAP related investments. The Communication and Outreach strategy will include all the tools developed under the programme including the awareness raising communication tools developed under the present component. Emphasis will be placed on fostering uptake and replication at the regional level of successful policies, practices and technologies implemented under the Programme through ad hoc awareness raising activities and tools: videos, manuals, progress reports, a MedProgramme Bulletin, a "Replication Atlas" highlighting areas and situations where replication of the Programme's demonstrations should preferentially occur. These tools will target regional and national decision makers and practitioners in the Programme countries, IFIs active in the region, the private sector, and regional cooperation entities.

#### **Expected Outcomes:**

- The increased uptake of the lessons and of the cutting-edge knowledge generated across the portfolio of interventions, and the active participation to IW LEARN activities, Communities of Practice, and events, improve the capacity of key regional stakeholders, and of the global IW community to build climate resilience, maintain coastal resources, protect biodiversity, and restore coastal ecosystems.
- The effective coordination and learning among all Child Projects, consistency with the Programme objectives, and synergies among projects and partners, ensured.

#### Indicators:

- Number of experience notes and scientific publications documenting the knowledge generated across the portfolio of interventions.
- Number of awareness raising communication tools at regional and global levels on the objectives, progress and accomplishments of the Programme.
- Programme monitoring system successfully developed and periodically reporting (every six months) on the progress of the Programme as a whole, and of child projects.

### **E) THE MEDITERRANEAN SEA PROGRAMME AND THE SUSTAINABLE DEVELOPMENT GOALS**

The proposed Programmatic Approach will foster the achievement of numerous targets of the Sustainable Development Goals, with special focus on Goals 3, 5, 6, 12, 13, and 14. The following table summarizes the Programme's contribution to the SDGs process.

Sustainable Development Goals	Components			
	1	2	3	4
1. End Poverty in all its forms everywhere	Target 5	Targets 5, 1.a		
2. End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	Targets 1, 4	Targets 1, 4		
3. Ensure healthy lives and promote well-being for all at all ages	Target 9			
5. Achieve gender equality and empower all women and girls	Target 5	Target 5	Target 5	Targets 5. 5.b
6. Ensure availability and sustainable management of water and sanitation for all	Target 3	Targets 1, 2, 3, 4, 5,6, 6.a, 6.b		Target 6.a
8. Promote sustained, inclusive and sustainable economic growth, full productive employment and decent work for all		Targets 4, 9		
12. Ensure sustainable consumption and production patterns	Targets 4, 5, 6, 12.a	Target 2	Target 2	Target 12.b
13. Take urgent action to combat climate change and its impacts		Targets 1, 2, 3, 13.a		Target 3
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Target 1	Target 2	Targets 2, 5, 14.c	
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss		Targets 1, 3, 5		

### **F) THE MEDITERRANEAN SEA PROGRAMME AND THE AICHI TARGETS**

The Component 3 of the Programme will contribute to several Aichi targets focusing on marine protected areas management and biodiversity conservation in Libya. This component mainly pursues Aichi Targets 5 (habitats), 11 (protected areas) and 12 (threatened species).

In particular, the MedProgramme provides a compendium of actions aiming at guiding and harmonizing the efforts of Libya towards achieving Aichi Biodiversity Target 11, by implementing in a prioritized manner the newly developed Libyan Marine Protected Areas National Strategy. Improving the coverage and effective management of Libyan marine and coastal protected areas will contribute to assist the country and the region reaching Aichi Target 11. This activity will also focus on governance and management of MPAs through stakeholder engagement and participatory approaches, in line with the spirit of Aichi Target 11.

Component 3 will also improve the status of ecosystems and species in Libya, by enhancing knowledge on marine key habitats, and monitoring marine megafauna (mammals, seabirds, turtles and cartilaginous fishes), in line with line with Aichi Targets 5 and 12.

Moreover, UNEP/MAP and SPA/RAC are leading several other projects and initiatives aiming at: (i) improving ecological representativeness and management effectiveness of Mediterranean MPAs (MedPartnership-MedMPAnet project, MedMPAnet II project); and (ii) improving knowledge on marine biodiversity features (MedKeyHabitats project). The MedProgramme will fully benefit of these ongoing projects and activities which are based on the Barcelona Convention principles and on the results and outcomes of previous phases' investments. The entire portfolio of biodiversity projects and initiatives will be executed in a fully coordinated matter under the frame of the Barcelona Convention increasing efficiency and synergies at regional level.

#### **G) INCREMENTAL REASONING AND EXPECTED CONTRIBUTIONS FROM THE BASELINE, THE GEFTF, SCCF, AND CO-FINANCING.**

GEFTF funds will provide incremental value across a range of project interventions to reduce land based sources of marine pollution, harmful chemicals and their transboundary impacts, enhance resilience of coastal ecosystem and biodiversity to climatic impacts and human induced degradation, improve knowledge exchanges and management, and foster gender equality. The Programme will build on a strong baseline of (i) investments, completed and ongoing, in the conventional treatment of wastewater discharges in the Mediterranean Sea and in the establishment of priority marine protected areas; and of (ii) developed and adopted national action/implementation plans on LBS reduction, biodiversity protection, ICZM and Persistent Toxic Substances elimination. Under the business as usual scenario however, the future development of interventions to combat environmental degradation in the Mediterranean Sea - necessarily fragmented albeit likely following the priorities indicated by the various national implementation plans - will lack the holistic vision advocated by the Barcelona Convention's guidelines and protocols, and made urgent by the dramatic deterioration of environmental and social conditions in sectors of the Southern and Eastern Mediterranean.

The Mediterranean Sea Programme, by mobilizing multiple focal areas within a coordinated context ensuring synergies and replication of innovative solutions, aims on the one side at adding an overall ecosystem approach dimension encompassing human health and welfare, climate resilience, water security, protection of biodiversity and of ecosystem services integrity, and on the other to accelerate the countries' responses to the threats posed to the coastal-marine ecosystems and to human livelihoods by growing climatic and socio-political instability.

Only through the joining of forces in a coordinated effort among all key actors, from countries, to donors, to specialized agencies and civil society, can these ambitious goals be attained.

The incremental action of the MedProgramme will also strive to:

- establish interconnectivity across countries that are using their GEF STAR allocations for protection of biodiversity, something that would not be achievable through small, isolated projects;
- expand the scale of impacts achieved by individual investments;
- use innovative processes and integrated management approaches that will lead to far more efficient and environmentally-friendly uses of coastal and marine resources;

- promote monitoring and identification of best practices and results;
- communicate any positive results (through the web, media and other means) achieved under the Programme to catalyse rapid changes by all stakeholders and decision makers;
- measure progress to impacts.

Governments will provide substantial and significant co-financing in cash and in kind for the projects related to the proposed interventions (including investments in wastewater treatment and reuse, MPAs, improved ICZM). Further co-financing is expected from the implementing and executing agencies, bilateral sources, and contributions from other UN Agencies and the EC, development agencies, and grants from other private donors.

## **H) INNOVATION, SUSTAINABILITY AND POTENTIAL FOR SCALING UP**

It is the first time that several GEF focal areas joint forces for the implementation of a Strategic Action Program through a coordinated set of full-fledged projects in fostering the implementation of measures for the protection and sustainable use of a major transboundary waterbody such as the Mediterranean Sea LME; thus achieving multiple benefits at the national, regional and global levels, and providing a collective response to regional and global soft and binding international environmental agreements. GEF's long experience in the development of SAPs has shown that in many, if not most cases the priority responses to environmental degradation of transboundary waterbodies involve interventions that require integration among focal areas. The need for such an integrated multiple focal area and funding sources effort is made even more compelling by the urgency to build environmental resilience and to adapt to growing climatic variability and change. This pioneering initiative could lead the way to the systematic adoption of programmatic approaches in IW SAP implementation whenever the consolidation of transboundary cooperation frameworks will allow, and the complexity of the drivers of degradation will require. Moreover, based on the experience from the implementation of the MedPartnership project, additional efforts towards converging management approaches are expected by all components of the MedProgramme. Integrative aspects of every activity will be additionally enhanced to develop consistent policy solutions for all the pressures and challenges targeted by the Programme.

The proposed Programmatic Approach presents other innovative aspects:

- Interventions will not simply focus on specific sites but rather on mechanisms, measures, processes and enabling conditions to build a healthy environment. They have been identified as demonstrations valid throughout the waterbody and with high replication potential.
- A number of the actions proposed are novel for the region. Particular mention in this regard has to be made to: treated wastewater reuse and managed aquifer recharge for combating seawater intrusion in the coastal area; the translation of vulnerability to human action and climatic events of coastal resources and ecosystems into "Coastal Zone Land and Water Use Capability Units" and "vulnerability and suitability maps; Inter-ministerial, or inter-department committees", as part of comprehensive ICZM; the focus on water security and improved health and livelihoods of coastal populations present in all components of the Programme.
- Additional efforts beyond coordination of activities and initiatives in order to ensure full integration and propose consistent policy and management solutions to multiple challenges.

Institutional sustainability will be promoted by consolidating national policy, planning and regulatory frameworks that support: LBS reduction - hazardous chemicals, wastes and nutrients; sustainable coastal zone and protected area management; provision and maintenance of coastal ecosystem services, and marine/coastal protected area management. The context of regional agreements, binding instruments and long-standing multi country cooperation established through the Barcelona Convention and its Protocols and previous GEF funded initiatives will foster sustainability and scaling up. Harmonized monitoring protocols and indicators, linked with interconnected databases will also improve management capacity and sustainability at both national and regional levels. Environmental sustainability is promoted throughout the Programme, particularly by mainstreaming sustainable consumption and production, environmentally sustainable use of coastal area freshwater and other natural resources, and by integrating marine protected areas along the Mediterranean shores.

The Programme will catalyse replication of those innovations across its Child Projects that can be deployed across the Mediterranean Basin in particular through the partnership including main multilateral and bilateral agencies and

donors, IFIs, and NGOs that will implement the Programme. A particular focus on identifying Child Project indicators to measure success will allow leveraging additional financing. The policy and coordination platforms will support investment going forward and ensure that future interventions can be more effective, accelerate delivery and results, and avoid mistakes. The potential exists for sharing lessons and scaling up outcomes for sustainable productive coastal zones and marine protected areas with effective management and long term sustainable financing.

2. *Stakeholders*. Will program design include the participation of relevant stakeholders from [civil society organizations](#) (yes ☒ /no ☐) and [indigenous peoples](#) (yes ☐ /no ☐)? If yes, identify key stakeholders and briefly describe how they will be engaged in program preparation.

Stakeholder participation is an inherent part of the structure of MAP and the Barcelona Convention where all countries (represented by the MAP focal point) form the contracting parties to the Barcelona Convention. Within each country MAP and its RACs have designated focal points that are responsible for the co-ordination of specific actions. In addition about 100 NGO's and IGO's, termed "partners" are participants to the meetings of the Barcelona Convention. It should also be stressed that stakeholders participated in the formulation of the TDA-MED, SAP-MED, SAP-BIO and countries NAPs, on which the present Programme is based. The activities of the Programme have been developed based on priorities of all participating countries, including stakeholders, and these activities have been designed to involve all key stakeholders on a number of levels, from implementation, knowledge transfer, dissemination and replication. In summary, the key stakeholders in the MedProgramme on a national level include:

- Public Sector: ministries responsible for water resources; environment; spatial and development planning; transport; tourism; fisheries; industry; maritime affairs; health; fire-fighting; community development; education; culture and local government authorities.
- Private Sector: national and regional organizations representing: farmers; fisher folk; manufacturers/industrialists; tourism and aquaculture sector; banks; insurances.
- Non-governmental Organizations (NGOs): national trusts; conservation associations; women's organizations; community-based organizations (CBOs);
- Scientific community: researchers; sociologists; environmental managers; engineers (water, civil, environmental); environmental economists; biologists; climatologists, geographers, oceanographers; teachers; curriculum specialists; media practitioners;
- General public such as the entire coastal population of the Mediterranean Basin (in particular those living in identified hotspots and sensitive areas) and the 176 million tourists visiting the Mediterranean annually.

At a regional and global level the stakeholders will be the various signatories to the relevant Multilateral Environmental Agreements (e.g. Barcelona Convention and its Protocols, CBD, Basel Convention, UNCCD, Rotterdam Convention, Stockholm Convention) and all individuals and organizations associated with the achievement of the 2030 Sustainable Development Goals. In principle, stakeholders will participate in the project implementation through a variety of mechanisms including the following:

- Involvement of the public sector through the MedPartnership focal points (who will become the Programme's focal points): co-ordination of the public sector will also benefit from the involvement of other relevant focal points including MAP, MED POL (for pollution control), SPA/RAC (biodiversity), SCP/RAC (cleaner production) and PAP/RAC (priority actions and coastal zone management), and Plan Bleu (Observatory of Sustainable Development in the Mediterranean);
- Involvement of civil society through and NGO mobilization;
- Information disseminated to all key stakeholders (web, workshops, events, publications, etc.) through the Communication Strategies that will characterize each Child Project;
- Active participation of relevant stakeholders in the implementation of project activities.

3. *Gender Equality and Women's Empowerment*. Are issues on [gender equality and women's empowerment](#) taken into account? (yes ☒ /no ☐ ). If yes, briefly describe how it will be mainstreamed into program preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

Gender mainstreaming has been the primary methodology for integrating a gender approach into environment and development efforts. It is defined by the UN Economic and Social Council as: "...the process of assessing the



implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels. It is a strategy for making the concerns and experiences of women as well as of men an integral part of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres, so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal of mainstreaming is to achieve gender equality”.

UNEP and all the programme’s partner agencies are committed to supporting capacity development of its national partners to adopt approaches that advance women’s rights and take account of the full range of their contributions to development. Involving both women and men in the Programme’s activities is likely to increase project effectiveness and efficiency. Participation by both women and men improves project performance and improves the likelihood of sustainability. In other words, a project is more likely to achieve what planners hope it will achieve if women and men (both rich and poor and representing different sectors) are active participants and decision makers.

In order to ensure that gender considerations are well integrated into the development of the Child Projects, in the implementation process and in the delivery of the outputs, a gender specialist will be hired during the project preparation phase and will be involved throughout the duration of the programme and provide input at important milestones. This will include particular attention to the review and update of the child projects structures, objectives and to the development of the results based framework and relevant indicators and targets. Moreover, the gender activities under the programme will be reported using the GEF6 Gender indicators.

On gender issues the MedProgramme will adopt a three-pronged approach:

1. *Mainstreaming gender in Child Projects execution* - Balanced gender participation in project execution activities will be ensured, including in working groups, the project management unit, text drafting teams, etc. Gender consideration will be mainstreamed in all documents produced by the project, and particular attention will be paid to gender balance in monitoring and reporting activities. The project will work to ensure a balanced participation among men and women in the overall stakeholder involvement strategy and in consultation workshops and training programmes, and will support both women and men contribution individually, rather than assuming that both groups will benefit equally from gender-neutral development interventions.
2. *Gender Assessment* - As part of the updated TDA, and through the application of methodologies for the collection of sex disaggregated data, the MedProgramme will provide an assessment of women’s present role in coastal zone land, water and wastes management and the their exposure to harmful chemicals and wastes, and associated risks.
3. *Integration of the gender equality into coastal management policies* - A major objective of the MedProgramme will be the development of supportive policy and legislative frameworks, and of monitoring protocols harmonized across beneficiary countries. These efforts will also be aimed at ensuring that the gender perspective is successfully incorporated into environmental and ICZM policies and activities. It is expected that this objective will be achieved by:
  - identifying gaps in equality and developing strategies and policies to close those gaps;
  - considering gender issues in the mapping and analysis of coastal zone uses;
  - promoting women’s participation in awareness raising and training activities;
  - supporting for educational activities, on topics such as the environment, energy, and decision-making in general;
  - involving women’s organizations: while the responsibility for implementing a gender approach does not rest solely with women’s organizations, they are natural vehicles for promoting gender equality at the local as well as the national level.

4. *Benefits*. Describe the socioeconomic benefits to be delivered by the program at the national and local levels. Do any of these benefits support the achievement of [global environmental benefits](#) (for GEF Trust Fund), and/or adaptation to climate change?

The MedProgramme will bring about a wealth of benefits at the national and local levels: from improved water security due to better coastal aquifer management, improved health of coastal populations due to elimination/reduction of pollution from harmful chemicals, and higher quality freshwater supply, to better and more

sustainable livelihoods thanks to enhanced coastal management and integrity of coastal ecosystem services, to more sustainable tourism, to gender equity and more.

These national or local benefits will all be derived through actions also aimed at achieving the goal set for the IW, CW and BD focal areas, and at accruing global benefits in line with the provisions of the GEF Instrument. Global benefits will relate to restored integrity of a globally significant transboundary large marine ecosystem and of its coastal areas through multi-country cooperative actions; decreased exposure of humans and the environment to hazardous persistent chemicals and waste of global importance; more effective protection of globally significant biodiversity and the ecosystem goods and services that it provides to society; increased resilience to the adverse impacts of climate change in vulnerable developing countries.

#### GLOBAL BENEFITS

##### *International Waters focal area*

The goal of the is to foster collective management for transboundary water systems and facilitate implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of water dependent ecosystem services. The global environment benefits targeted by the IW focal area are related to transboundary concerns, including: (i) multi-state cooperation to reduce threats to international waters; (ii) reduced pollution load in international waters from nutrient enrichment and other land-based activities; (iii) restored and sustained freshwater, coastal, and marine ecosystems goods and services, including globally significant biodiversity, as well as maintained capacity of natural systems to sequester carbon; and (iv) reduced vulnerability to climate variability and climate-related risks, and increased ecosystem resilience.

##### *Chemicals and Waste Focal Area*

The goal is: To prevent the exposure of humans and the environment to harmful chemicals and waste of global importance, including POPs, mercury and ozone depleting substances, through a significant reduction in the production, use, consumption and emissions/releases of those chemicals and waste.

##### *Biodiversity Focal Area*

The goal of the Biodiversity strategy is to maintain globally significant biodiversity and the ecosystem goods and services that it provides to society. It includes focus on the establishment and effective management of coastal and near shore protected area networks to increase the representation of globally significant marine ecosystems in protected area systems.

5. *Risks*. Indicate risks, including climate change risks, potential social and environmental future risks that might prevent the program objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the program design:

<b>Risk</b>	<b>Level</b>	<b>Mitigation Measures</b>
<b>Lack of political support</b>	Low	This is considered highly unlikely, due to the consolidated multi-country cooperation frameworks, and the government adopted action plans and priorities for action that will guide the MedProgramme in the design of Child Projects.
<b>Political instability</b>	High	Some southern and eastern Mediterranean countries are going through a period of political volatility and social unrest that might negatively affect the Programme's full implementation. For this reason, the key Child Projects will be implemented only in countries where conditions are considered stable and/or rapidly improving. It has to be fully appreciated on the other hand that the deteriorated social conditions and migratory fluxes affecting parts of the region call for urgent support from the international community, support of which the Programme would represent a very meaningful signal.

<b>Climate Change and Variability</b>	Moderate	Future climatic scenarios indicate the Mediterranean region as one of the most affected by climate change and variability, whose signs are already being felt particularly in the Southern and Eastern Mediterranean. Improving the resilience of coastal populations and ecosystems to climatic impacts – increased frequency, duration and intensity of droughts, sea-level rise, increased evaporation – is in fact a key objective of the Programme, and several Child Projects will be focused on it, based on the priorities and recommendations of the TDA supplement on climate change and variability recently completed by UNEP/MAP - GEF. It is not expected that climate change will have an impact on Child Projects execution. Nevertheless, according to several sources, climate change might be contributing to the instability of the region and to the migratory fluxes. Therefore contingency measures and targeted mitigation measures to manage the potential adverse effects of unanticipated events will be included in project designs.
<b>Inability of the regional Programme framework and management structures to guide and influence the timely and effective implementation of national project activities</b>	Moderate	Good communication and cooperative relations will be essential for achieving expected Programme level results. The Programme will include a strong communication strategy and M&E plan. Reporting procedures will be carefully coordinated that maximize the use of monitoring outputs from participating projects for programme level reporting. The long-standing coordinating role of MAP and the guiding role of the Barcelona Convention will help minimize this risk.

6. *Coordination.* Outline the institutional structure of the program including [monitoring and evaluation](#) coordination at the program level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

UNEP, as lead GEF implementing Agency for the MedProgramme, will play a close coordination and liaison role with the other implementing agency (EBRD) and executing partners, and with the GEF Secretariat. UNEP will also be responsible for all enquiries regarding the Programme implementation progress and the Programme-level reporting, mid-term evaluation and terminal evaluation and, final Programme completion and the achievement of higher level of Programme's impacts on the global environment. UNEP/MAP, as leading executing Agency, will be in charge of coordinating the implementation of the activities under the Programme and ensure synergy with on-going GEF projects related to the Programme, and with investments and initiatives funded by other donors in the Mediterranean. UNEP/MAP in close cooperation and communication with UNEP and the other partner Agencies will allocate through Component 4 Programme financial and technical resources in achieving coordination and exchange of experiences.

A Programme Steering Committee (PSC), chaired by the countries in a rotational way, co-chaired by UNEP/MAP, and comprising of the national programme focal points from each country, additional Implementing Agencies (EBRD) and Executing Partners to the Programme, and possibly the GEF Secretariat in an ex-officio capacity will act as an advisory mechanism to maximize synergies and ensure the successful design and implementation of the Programme. The main role of the PSC is to provide a coordination forum and a monitoring platform during the implementation phase of the Programme. It will also provide an overall, high-level, coordination of the technical alignment and synergy between the Programme components. It will meet virtually every quarter to track progress and provide opportunities for cross-fertilization; it will meet face-to-face once a year in a different project site to increase uptake of lessons and build synergies, in coincidence with the yearly Stocktaking Meetings organized as part of the Programme with broad attendance of programme staff, scientific community, policy makers and countries authorities.

From the early stage of the Programme implementation, particular attention will be placed to enabling conditions for integrated solutions. At the first PSC special attention will be devoted to the opportunities for integration. Integration will remain a specific task during whole implementation phase of the Programme. Due attention will be dedicated to it at every PSC meeting, as well as during coordination of the technical alignment and meetings of the Programme's components.

*7. Knowledge Management.* Outline the knowledge management approach for the program, including plans for the program to learn from other relevant initiatives, and to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

Effective knowledge management is a core leveraging mechanism of the MedProgramme to achieve up scaling of approaches, policies and technologies promoted by the Programme at multiple scales. Knowledge management will receive support under Component 4. It will complement the national projects, maximize the effectiveness of the overall MedProgramme and provide opportunities for south-south learning, foster intergovernmental cooperation, use M&E tools and geospatial services, apply best practices and develop portfolio-wide training and communication strategies.

The MedProgramme will also learn from other ongoing GEF supported LME SAP implementation and programmatic approach type initiatives in the region, and non-GEF initiatives such as the H2020 programme of the EU. UNEP/MAP through the development of the "Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria" (IMAP) information system will ensure the establishment of the regional pool of data that will allow the production of common indicator assessment reports in an integrated manner, following the monitoring specifics and data provided, which ensures comparability across the Mediterranean region. In addition, the UNEP/ROA managed Africa Adaptation Knowledge Network online portal, an information sharing portal on ecosystems based adaptation best practice, can also contribute to sharing knowledge generated from this Programme.

A knowledge management component will be integrated into all Child Projects. The regional activities under the Components 1 and 4 of the MedProgramme will adapt existing tools to the needs of the Programme and make them available to all participating countries, and will strengthen and harmonize monitoring capabilities and protocols on Programme countries. The above mentioned regional Components will also provide training and capacity building in the application of the tools to ensure consistent quality, reporting and dissemination of new knowledge generated, lessons learnt and best practices.

*8. National Priorities.* Is the program consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes ☒ /no ☐ ). If yes, which ones and how: NAPAs, NAPs, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, etc.

The MedProgramme will adhere to the priorities set forth by the countries in their National strategies and action plans for the implementation of the provisions of relevant conventions – Barcelona Convention and ICZM protocol, Biodiversity Convention and Aichi Target 4, Stockholm, Basel and Minamata Conventions, and will implement SAP MED and SAP BIO priority actions, and address issues of transboundary concern identified by the TDA and agreed upon by the countries. Details for each Child Project are provided under point b) Alternative Scenario.

The MedProgramme will also assist countries in moving towards the achievement of numerous SDG Targets (see paragraph 1-E under PART II Programmatic Justification).

*9. Child Projects Selection Criteria.* Outline the criteria used or to be used for child project selection and the contribution of each child projects to program impact.

The Child Projects under the MedProgramme fulfil the following selection criteria:

- Adheres to national priorities.
- Relates to a transboundary environmental concern (TDA) or Hot Spot.
- Addresses one or more priorities/targets identified in SAP MED or SAP BIO.

- Fosters the implementation of NAP, NIP, NAPA and other strategic frameworks.
- Enhances national compliance with globally and regionally agreed instruments and policy guidance.
- Is the result from previous “pilot” experiences and/or is innovative for the region.
- Achieves/supports measurable stress reduction.
- Contributes to reduce stress and pollution at source.
- Can be proven as cost-effective and sustainable.
- Has a high replication potential, i.e. can be broadly replicated within the Mediterranean physical and socio-economic context, achieving a substantial cumulative stress reduction.
- Responds to demand in countries.
- Is likely to attract funding from countries, donors, IFIs.
- Includes gender balance and equity considerations.



**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENTS OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter](#) with this template).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Prof. Dr. Mr. Pellumb ABESHI	General Director of Environment.	Ministry of Environment	06/23/2016
His Excellency, Mr. Mirko SAROVIC	Minister	Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina.	07/22/2016
Eng. Ahmed ABOU ELSEOUD	Chief Executive Officer	Ministry of Environment Environmental Affairs Agency	07/04/2016
His Excellency, Mr. Mohamad AL MASHNOUK	Minister of Environment	Ministry of Environment	07/11/2016
Dr. Mustafa SOLIMAN	Management Committee Member	Environment Agency Authority	06/28/2016
Mrs. Marija VUKCEVIC	Director General for EU Integration and International Cooperation	Ministry of Sustainable Development and Tourism	06/27/2016
Mr. Mohamed BENYAHIA	Director of Partnership, Communications & Cooperation	Ministry of Energy Mining, Water & Environment	06/24/2016
Mrs. Sabria BNOUNI	Director for International Cooperation and Partnership	Ministry of Environment and Sustainable Development	06/27/2016

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF policies<sup>27</sup> and procedures and meets the GEF criteria for program identification and preparation.

Agency Coordinator, Agency name	Signature	DATE (mm/dd/yyyy)	Program Person	Telephone	Email Address
Brennan Van Dyke, Executive Coordinator, UNEP		July 25, 2016	Christine Haffner Sifakis Task Manager	+32222133053	Christine.HAFFNER-SIFAKIS@unep.org
Marta Simonetti, GEF Executive Coordinator for EBRD		22/7/2016	Marta Simonetti Task Manager	+442073387259	simonetm@ebrd.com

<sup>27</sup> GEF policies encompass all GEF managed trust funds, namely: GEFTF, LDCF, and SCCF

- C. Additional GEF Project Agency Certification** (*Applicable Only to newly accredited GEF Project Agencies*)  
For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PFD.

**LIST OF CHILD PROJECTS UNDER THE PROGRAM FRAMEWORK**

Child Projects under the Programme <sup>a/</sup>									
Country	Project Title	GEF Agency	GEF Amount (\$)					Agency Fee (\$)	Total (\$)
			IW	CW		BD	Total		
				POPs	Mercury				
	FSP								
National: Albania, Libya, Montenegro, Morocco and Tunisia. Regional: all GEF Countries	1.1 Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hot Spots and Measuring Progress to Impacts.	UNEP	3,000,000	6,250,000	3,000,000	-	12,250,000	1,102,500	13,352,500
National: Egypt, Lebanon, Morocco, Tunisia Regional: all GEF Countries	1.2 Mediterranean Pollution Hot Spots Investment Project.	UNEP	5,000,000		2,000,000	-	7,000,000	630,000	7,630,000
Albania, Bosnia & Herzegovina, Egypt, Lebanon <sup>28</sup> , Montenegro, Morocco and Tunisia.	1.3 Mediterranean Sea Finance for Water Systems and Clean Coasts (FINWACC)	EBRD	5,000,000	3,750,000		-	8,750,000	787,500	9,537,500
Albania, Bosnia and Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco and Tunisia..	2.1 Mediterranean Coastal Zones Climate Resilience Water Security and Habitat Protection.	UNEP	7,000,000	-		-	7,000,000	630,000	7,630,000
Regional: all GEF Countries	2.2 Mediterranean Coastal Zones: Managing the Water-Food-Energy and Ecosystem NEXUS.	UNEP	3,500,000	-		-	3,500,000	315,000	3,815,000
Libya	3.1 Management Support and Expansion of Marine Protected Areas in Libya.	UNEP	-	-		1,376,147	1,376,147	123,853	1,500,000
Regional: all GEF Countries	4.1 Mediterranean Sea Basin Environment and Climate Regional Support Project.	UNEP	2,000,000	250,000	250,000	-	2,500,000	225,000	2,725,000
	Total		25,500,000	10,250,000	5,250,000	1,376,147	42,376,147	3,813,853	46,190,000
				15,500,000					

<sup>a/</sup> Total amount of child project concepts should equal the GEF program financing requested and be consistent with Tables A, B and D.

<sup>28</sup> Subject to approval of Lebanon as a recipient country of EBRD funding and investments



## BRIEF DESCRIPTION OF THE CHILD PROJECTS UNDER THE PROGRAMMATIC APPROACH FRAMEWORK

ANNEX B is a collection Information Sheets of all Child Projects under the MedProgramme

The information sheets give an overview of the GEF implementing Agency, the leading executing and co-executing Agencies, the amount of GEF TF requested and an indicative co-financing amount for each Child Project under the Programme.

Moreover the information sheets provide a preliminary summary description of the scope of the projects, their expected outcomes, indicators, targets and an indication of the Country (ies) where the activities would be implemented.

For ease of the understanding of the MedProgramme, the table below shows the structure of each Component of the Programme, the related Child Projects, the preliminary list of executing partners and the GEF focal areas involved.

All the information provided in ANNEX B is indicative and will be confirmed and developed during the project preparation phase. At CEO endorsement all child project submissions will include sufficient detail regarding their execution arrangements.

<b>Mediterranean Sea Programme (MedProgramme)</b>			
<b>MedProgramme Component</b>	<b>Child Project</b>	<b>Indicative lists of executing Agencies<sup>29</sup></b>	<b>GEF Focal Areas</b>
1. Reduction of Land Based Pollution In Priority Coastal Hotspots, and measuring progress to impacts.	1.1 Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hot Spots and Measuring Progress to Impacts	UNEP MAP, UNIDO	IW and CW
	1.2 Mediterranean Pollution Hot Spots Investment Project.	EIB UNEP MAP	IW and CW
	1.3 Mediterranean Sea Finance for Water Systems and Clean Coasts (FINWACC).	EBRD <sup>30</sup> UNEP MAP	IW and CW
2. Enhancing Sustainability and Climate Resilience in the Coastal Zone.	2.1 Mediterranean Coastal Zones Climate Resilience Water Security and Habitat Protection.	UNEP MAP UNESCO GWP-Med	IW
	2.2 Mediterranean Coastal Zones: Managing the Water-Food-Energy and Ecosystem NEXUS.	GWP-Med UNEP MAP	IW
3. Protecting Marine Biodiversity.	3.1 Management Support and Expansion of Marine Protected Areas in Libya.	UNEP MAP IUCN WWF Med	BD
4. Knowledge Management and Programme Coordination	4.1 Mediterranean Sea Basin Environment and Climate Regional Support Project.	UNEP MAP	IW and CW

<sup>29</sup> At CEO endorsement all child project submissions will include sufficient detail regarding their execution arrangements

<sup>30</sup> The Executing Agency or agencies for Child Project 1.3 will be identified following a competitive bidding process in coherency with international and EBRDs procurement rules, as relevant and dependent on the financial instruments that are being proposed.

CHILD PROJECT 1.1	REDUCING POLLUTION FROM HARMFUL CHEMICALS AND WASTES IN MEDITERRANEAN HOT SPOTS AND MEASURING PROGRESS TO IMPACTS
<b>Implementing Agency:</b>	UNEP
<b>Leading Executing Agency:</b>	UNEP/MAP
<b>Co-Executing Agencies:</b>	UNIDO
<b>GEFTF Amount:</b>	IW: 3,000,000 USD - CW: 9,250,000 USD (POPs: 6,250,000 USD; and Mercury: 3,000,000 USD)
<b>Co-financing:</b>	>55,000,000 USD
<b>Summary Description:</b>	<p>The CP includes both national and regional activities:</p> <p><u>National Actions</u> (UNEP/MAP, UNIDO)  <i>Harmful chemicals reduction - implementation in Mediterranean coastal hotspots of measures - including regulatory and economic approaches - aimed at: (i) accelerating the reduction and elimination of POPs and POPs stockpiles; (ii) assessing and reducing threats from anthropogenic mercury emissions.</i></p> <p>The scope of the activities covers (i) the disposal of stock piles of POPs, two demonstration pilots on decontamination of sites (POPs hotspots) and prevention/reduction of POPs in terms of released in the industrial sector and landfills by implementing BAT, BEP and in the intentional use of POPs in products and activities. The above activities will be supported through the application of relevant tools to enhance capacities in the targeted sectors with regard to ESM disposal, management prevention and enforcement; (ii) reduction of mercury from the combustion sector and the cement sector; (iii) management plans for chlor-alkali conversion and closure of mines; Decontamination of sites management plans; mercury stockpiles elimination; (iv) prevention of mercury use in laboratories.</p> <p><u>Regional Actions</u> (UNEP/MAP):  <i>Progress to impacts - enabling the assessment of progress towards Programme's impacts, and achievement of relevant SDG targets.</i></p> <p>This activity will specifically support (i) the update of the baseline situation (TDA) after over 10 years from the previous diagnostic, combined with a State of Environment report for the Mediterranean, fully integrating the findings of the Climate Change and Variability project, the Coastal Aquifer Supplement and Action Plan, and (ii) improved integration and sharing of existing monitoring and research data, through common protocols, reporting templates, data agreements for sharing data, linking and sharing of databases, strengthening the science and policy making interface, training and capacity building of data institutions and ensuring greater access to data, comparability and more scientific/data driven assessments.</p>
<b><u>Expected Outcomes:</u></b>	<ul style="list-style-type: none"> <li>• In coastal hot spots, measurable reduction of wastes and hazardous chemicals (POPs, Mercury) impacting human health and coastal habitats, through innovative practices, techniques and regulatory approaches.</li> <li>• Update of the baseline situation (TDA), harmonization of monitoring protocols, methodologies and procedures in compliance with IMAP, including design of offshore reference network and gender assessment.</li> </ul>
<b><u>Indicators:</u></b>	<ul style="list-style-type: none"> <li>• Number of tons of harmful chemicals and wastes (POPs and Mercury) disposed and reduced.</li> <li>• Updated baseline (TDA), including gender assessment.</li> <li>• Report on progress to impacts.</li> <li>• Number of additional sites for offshore stations.</li> <li>• Proposal for a data sharing regional policy, developed.</li> </ul>
<b><u>Targets:</u></b>	<ul style="list-style-type: none"> <li>• Reduction/disposal of 2000 tons of POPs</li> <li>• Reduction/disposal of 30 tons of Mercury</li> <li>• Baseline TDA is updated by the end of the programme.</li> <li>• By the end of the Programme, report on progress to impacts and on the achievement of relevant SDGs.</li> <li>• Definition of minimum 20 locations for offshore reference monitoring stations.</li> <li>• Data sharing regional policy prepared as an input for the deliberation of the Contracting Parties to the Barcelona Convention.</li> </ul>
<b><u>Country(ies):</u></b>	<p>1) National: Albania, Libya, Montenegro, Morocco and Tunisia.</p> <p>2) Regional: all GEF Countries.</p>

CHILD PROJECT 1.2	MEDITERRANEAN POLLUTION HOT SPOTS INVESTMENT PROJECT.
<b>Implementing Agency:</b>	UNEP
<b>Leading Executing Agency:</b>	EIB
<b>Co-Executing Agencies:</b>	UNEP/MAP
<b>GEFTF Amount:</b>	IW: 5,000,000 USD - CW 2,000,000 USD (Mercury: 2,000,000 USD)
<b>Co-financing:</b>	>510,000,000 USD
<b><u>Summary Description:</u></b>	<p>In line with National Action Plans (NAPs) for the implementation of the SAP MED on land based pollution reduction, and consistent with priorities and coastal management strategies emerging from the results of MedPartnership, this project will include at major innovative investments, among the priorities listed below, in Mediterranean coastal areas at risk of groundwater over-exploitation, loss of coastal habitats and eutrophication. Besides the project will supply an additional constant source of water that can be used in agriculture and/or forestry and thus reducing the pressure on the already scarce water sources. GEF funding will support the selection and design of the investments, and the capacity building related to them.</p> <p><u>National Actions (EIB):</u></p> <p><i>WWTP Extension and upgrade including treated wastewater reuse/reinjection (MAR).</i> Activities in this area will result in a reduction of organic pollution reaching the Mediterranean Sea and causing coastal ecosystem degradation. Expected interventions in this area will include:</p> <ul style="list-style-type: none"> <li>• Extension in capacity of WWTPs in areas with important population growth so that the increasing wastewater amount can be treated.</li> <li>• Analysis of demand and options for reuse of treated wastewater (e.g. irrigation) and sludge (e.g. digestion for energy production)</li> <li>• Definition of the technical options to achieve the required level of wastewater and sludge treatment in WWTPs to meet the requirements for reuse as well as minimize the operation costs.</li> </ul> <p><i>Depollution catchment area.</i> Activities in this area will take a holistic approach to the depollution and water resources management at the level of catchments which are draining into the Mediterranean, in order to improve the human and environmental and health situation and reduce the contaminants loads entering the Mediterranean Sea. Expected interventions in this area will include:</p> <ul style="list-style-type: none"> <li>• Identification of point and diffuse sources of pollution at the catchment level to prioritise the environmental and health risks</li> <li>• Definition of technical options for investment in depollution infrastructure (WWTP, solid waste landfills etc.)</li> <li>• Definition of water resources management options with all stakeholders at the watershed level to guarantee sustainable use of resources.</li> </ul> <p><i>Treatment of industrial emissions and remediation of former industrial areas.</i> Activities in this area will result in a reduction and control of chemical and organic pollution from past and present industrial activities in coastal areas impacting human health and livelihoods, and coastal ecosystems, thereby reducing pollution discharges to the Mediterranean sea. Expected interventions in this area will include:</p> <ul style="list-style-type: none"> <li>• Construction of WWTP for industrial areas or units (e.g. tanneries, slaughterhouses, textile etc.)</li> <li>• Remediation of soil and groundwater in contaminated industrial sites representing a health hazard</li> </ul> <p><i>Reduction of Mercury releases</i> Activities in this area will result in the preparation of pre-investment studies for Mercury decontamination and conversion of industrial processes that will unlock investments to reduce/dispose 20 tons of mercury.</p> <p><u>Regional Actions (UNEP/MAP):</u> Development of common environmental standards with regards to desalination. Aquaculture, and waste water and sludge management and reuse prepared as an input for the deliberation of the Contracting Parties to the Barcelona Convention.</p>

<b><u>Expected Outcomes:</u></b>	<ul style="list-style-type: none"> <li>• In coastal hot spots, water security, human and ecosystem health, and climate resilience improved through investments on:</li> <li>• WWTPs upgrade and reuse of treated wastewater (including MAR);</li> <li>• Depollution of catchment areas;</li> <li>• Mercury emissions reduced.</li> <li>• Remediation of former industrial areas;</li> <li>• Common environmental standards with regards to desalination, aquaculture, and wastewater treatment developed.</li> </ul>
<b><u>Indicators:</u></b>	<ul style="list-style-type: none"> <li>• Number of WWTP built or rehabilitated,</li> <li>• Number of additional m3 of treated wastewater/sludge reused.</li> <li>• Tons of mercury reduced.</li> <li>• Measurable pollution reduction.</li> <li>• Common regional standards on wastewater and sludge management and reuse, developed.</li> </ul>
<b><u>Targets:</u></b>	<ul style="list-style-type: none"> <li>• Risk reduction in at least two coastal hotspots.</li> <li>• Reduction of 20 tons of Mercury</li> <li>• At least 4 WWTP built or rehabilitated</li> <li>• At least 150,000 m3/d of additional waste-water treated to secondary level</li> <li>• At least 20,000 m3/d of additional treated wastewater reused</li> <li>• At least 20,000 m3/d of additional sludge digested</li> <li>• Risk reduction in at least two coastal hotspots.</li> <li>• Common regional standards on waste water and sludge management and reuse prepared as an input for the deliberation of the Contracting Parties to the Barcelona Convention.</li> </ul>
<b><u>Country(ies):</u></b>	<p>National: Egypt, Lebanon, Morocco, Tunisia</p> <p>Regional: all GEF Countries</p>

<b>CHILD PROJECT 1.3</b>	<b>MEDITERRANEAN SEA FINANCE FOR WATER SYSTEMS AND CLEAN COASTS (FINWACC)</b>
<b>Implementing Agency:</b>	EBRD
<b>Leading Executing Agency:</b>	The Executing Agency or agencies for Child Project 1.3 will be identified following a competitive bidding process in coherency with international and EBRDs procurement rules, as relevant and dependent on the financial instruments that are being proposed.
<b>Co-Executing Agencies:</b>	UNEP/MAP
<b>GEFTF Amount:</b>	IW: 5,000,000 USD - CW 3,750,000 USD (POPs: 3,750,000 USD)
<b>Co-financing:</b>	90,000,000 M USD
<b>Summary Description:</b>	<p>The proposed project will build on EBRD's track record of success in market creation and transformation, and will ensure sustainability through the private sector and municipal involvement. The project will work with private, municipal, and infrastructure sectors (such as irrigation providers) by providing financing, incentives, and technical assistance to accelerate an uptake of new technologies to tackle land-based and water based pollution, supporting improvement of systems for water management and treatment, and improvements in waste and chemicals management. The details of the intervention will be presented as part of the Child Project Document.</p> <p>The investments supported as part of the project will observe the principles of transition, sound banking and additionality as applied consistently across all EBRD investments. The selection of the investments will be in line with the criteria defined in other EBRD-GEF projects (such as FINTECC), and will take into account (a) impact of the investment in tackling the issue on hand, (b) innovativeness of the proposed technologies and practices in the targeted markets, (c) demonstration effect and replication potential of the supported technologies and techniques, and (d) other benefits of the investments associated with other aspects such as gender/inclusion.</p> <p>In particular, the proposed project will leverage the EBRD's expertise in designing and implementing innovative investment programmes, and will apply one or more established approaches deemed suitable to the participating countries pending detailed analysis, such as:</p> <ul style="list-style-type: none"> <li>(i) Development of a regional investment programme, based on the model of GEF and SCCF-funded technology transfer programme FINTECC, which would be aimed at piloting/demonstration of environmental technologies;</li> <li>(ii) Implementation of investment programmes with specific geographic focus, encompassing investments across sectors in wastewater, solid waste and industrial pollution</li> <li>(iii) Support of individual high impact investment projects, typically in the municipal sector, industrial or agribusiness sector focusing on wastewater treatment, waste management, or water management (e.g. in irrigation systems).</li> </ul> <p>The Project will target investments into point and non-point pollution sources. The investments will cover technologies in the area of water treatment, waste water management, and in agribusiness sector also fertilizer management. The Project will also aim to improve chemicals and waste management, such as promotion of chlorine free operations, upgrade of PCB-based electrical equipment, fuel quality control in waste oil refineries or cement industry, solvent recovery systems, or promoting land remediation and elimination and safe disposal of POPs containing waste.</p>
<b>Expected Outcomes:</b>	<ul style="list-style-type: none"> <li>• Private/public investments enable pollution reduction in priority coastal and catchments areas through the improvement of water and waste water management systems and the introduction of modern and efficient technologies and practices.</li> <li>• Prevention or elimination of POPs.</li> </ul>
<b>Indicators:</b>	<ul style="list-style-type: none"> <li>• Volume of waste-water treated in private/public systems.</li> <li>• Volume of recycled water in private/public systems returned to supply.</li> <li>• Number of private/public water system clients connected to modern wastewater facilities</li> <li>• Tons of POPs reduced or prevented.</li> </ul>
<b>Targets:</b>	<ul style="list-style-type: none"> <li>• At least three private/public wastewater systems discharging directly or indirectly into coastal hotspots upgraded.</li> <li>• At least 1.5 million m3 of water recycled per year in private/public systems.</li> <li>• At least 3.5 million m3 of additional wastewater treated per year in private/public systems.</li> <li>• Reduction and prevention of 1,250 tons of POPs.</li> </ul>
<b>Country(ies):</b>	Albania, Bosnia & Herzegovina, Egypt, Lebanon <sup>31</sup> , Montenegro, Morocco, and Tunisia.

<sup>31</sup> Subject to approval of Lebanon as a recipient country of EBRD funding and investments.

<b>CHILD PROJECT 2.1</b>	<b>MEDITERRANEAN COASTAL ZONES CLIMATE RESILIENCE WATER SECURITY AND HABITAT PROTECTION</b>
<b>Implementing Agency:</b>	UNEP
<b>Leading Executing Agency:</b>	UNEP/MAP
<b>Co-Executing Agencies:</b>	UNESCO and GWP Med
<b>GEFTF Amount:</b>	IW: 7,000,000 USD
<b>Co-financing:</b>	>25,000,000 USD
<b><u>Summary Description:</u></b>	<p>In selected priority coastal areas, the project will implement a blend of national and regional actions:</p> <p><i>Coastal Zone Management:</i> The actions of the project will geographically extend to the spatial components of the Source-to-Sea continuum: basins/aquifers, coastal and marine zones. In selected countries, the project will support the implementation of comprehensive ICZM approaches, including:</p> <ul style="list-style-type: none"> <li>• Preparation, adoption and support to implementation of National ICZM Strategies, coastal plans, marine spatial plans and plans focused on coastal resilience to Climate Variability and Change;</li> <li>• Implementation of the Integrated Management Framework (IMF);</li> <li>• Translation of environmental vulnerabilities (ecosystems, climate, and contamination of freshwater) into Coastal Zone Use-Capability, vulnerability and suitability maps and related guidance;</li> <li>• Use of ICZM tools and instruments;</li> <li>• Capacity building activities for ICZM, MSP and adaptation to climate variability and change;</li> <li>• SCP technical, regulatory, economic and market oriented measures.</li> </ul> <p><i>Protection of Coastal Aquifers and Groundwater Related Ecosystems</i> In selected countries and critical coastal sections, the project will support the implementation of actions foreseen in the Action Plans on the sustainable management of coastal aquifers and groundwater related ecosystems agreed upon by the countries as part of MedPartnership. The actions will include:</p> <ul style="list-style-type: none"> <li>• The further improvement of the inventory and characterization of coastal aquifers produced by MedPartnership, through in depth systematic assessments (TWAP Level 2) using amongst others hydrogeochemical techniques and low cost geophysical investigations, assessing seawater intrusion and aquifer salinization, identifying other sources of contamination, mapping of water and land uses and inventorying wells, estimating abstractions and related energy consumption;</li> <li>• The identification of major submarine groundwater discharge zones (SGD), and assessment of flows and contaminant loads;</li> <li>• The systematic mapping of groundwater vulnerability in the coastal zone, using methods accounting for both vertical and horizontal vulnerability, and defining local land uses and human activities compatible with the various classes of vulnerability;</li> <li>• The design and testing on the ground of modern multi-purpose monitoring networks;</li> <li>• The assessment and diagnosis of coastal ecosystems related to priority aquifers, and the strengthening of management capacity related to ecosystem services and their evolution trends, and on the strong relationships existing between groundwater flows, wetlands services, and human wellbeing.</li> </ul>
<b><u>Expected Outcomes:</u></b>	<ul style="list-style-type: none"> <li>• Coastal zone sustainability enhanced through the adoption of comprehensive national ICZM strategies, coastal plans and instruments, and the introduction of sustainable consumption and production (SCP) technical, regulatory, economic and market-oriented measures and improving gender equality.</li> <li>• Increased resilience to climatic variability and change, and enhanced water security of coastal populations through improved sustainability of services provided by coastal aquifers and by groundwater related coastal habitats.</li> </ul>
<b><u>Indicators:</u></b>	<ul style="list-style-type: none"> <li>• Number of hectares of landscapes and seascapes under improved management.</li> <li>• Number of countries implementing comprehensive ICZM and SCP approaches, including Coastal Zone Use-Capability mapping.</li> <li>• Number of persons, reflecting gender balance, trained on integrated approaches, ICZM, MSP, and adaptation to climate variability and change.</li> <li>• Number of persons, involved in awareness raising activities.</li> <li>• Number of priority coastal aquifers and related habitats under improved conjunctive surface and groundwater management.</li> <li>• Number of countries where nation-wide dialogue on conjunctive surface and groundwater management solutions have been initiated.</li> <li>• Number of national inventories of submarine groundwater discharges (SGD).</li> </ul>
<b><u>Targets:</u></b>	<ul style="list-style-type: none"> <li>• At least 12,500,000 hectares under improved management of landscapes and seascapes.</li> <li>• At least 3 countries implementing ICZM strategies, plans and approaches.</li> <li>• At least 300 persons trained, reflecting gender, on ICZM, MSP and CVC adaptation.</li> <li>• At least 1,000 persons involved in awareness raising activities on coastal resilience and sustainability.</li> <li>• At least 5 priority coastal aquifers and related habitats under improved conjunctive surface and groundwater management.</li> </ul>

	<ul style="list-style-type: none"> <li>• At least 3 countries have initiate nation-wide dialogues on conjunctive surface and groundwater management solutions</li> <li>• All countries complete SGD inventory.</li> </ul>
<b><u>Country(ies):</u></b>	Albania, Bosnia & Herzegovina, Egypt, Lebanon, Libya, Montenegro, Morocco and Tunisia.

<b>CHILD PROJECT 2.2</b>	<b>MEDITERRANEAN COASTAL ZONES: MANAGING THE WATER-FOOD-ENERGY AND ECOSYSTEM NEXUS.</b>
<b>Implementing Agency:</b>	UNEP
<b>Leading Executing Agency:</b>	UNEP/MAP
<b>Co-Executing Partners:</b>	GWP Med
<b>GEFTF Amount:</b>	IW: 3,500,000 USD
<b>Co-financing:</b>	>18,000,000 USD
<b><u>Summary Description:</u></b>	<p>In addition to the coast, the project will focus on the inland areas where socio-economic and natural resources management decisions formulate the drivers and causes of issues manifested in the coastal and marine zones. Addressing the nexus of water-food-energy-ecosystem security, the project recognizes the relevance of the entire spectrum of competing water needs, stressing the explicit role, interests, and leadership of other sectoral stakeholders beyond the water sector.</p> <p>In selected coastal areas of priority, using the water-food-energy-ecosystems Nexus (a.k.a Nexus) approach, the project will seek to (i) understand the interlinkages among the Nexus sectors (ii) integrate -at the level possible- strategies and management options and identify solutions, as means to address issues of priority in coastal areas of importance, fostering water-food-energy security, reduction of land based nutrient pollution and other pressures, protection of coastal habitats and biodiversity and climate change resilience.</p> <p>Action will be taken to facilitate the Nexus approach being adopted at the Mediterranean level as part of the Barcelona Convention institutional framework as means to sustaining and upscaling the outcomes of the intervention.</p> <p>The actions listed below will feed a regional policy dialogue supported by the project under the auspices of the Barcelona Convention and/or the Union for the Mediterranean. This will facilitate the Nexus approach being adopted at the Mediterranean level as part of the institutional framework of either of the two aforementioned political processes, (related decisions should be taken by the member countries) as means to: (a) sustaining and upscaling the outcomes of the intervention; (b) matching the global nexus related efforts of the European Commission.</p> <p>Working on selected areas of importance the actions of the project will include:</p> <ul style="list-style-type: none"> <li>(i) Supporting the development of Nexus Strategies and Action Plans.</li> <li>(ii) Using the Nexus Approach in ICZM plans and strategies.</li> <li>(iii) Supporting the enhancement of cooperation in transboundary basins/aquifers.</li> <li>(iv) Developing of Nexus Assessments, the outcomes of which will be the basis for the implementation of the above. The Nexus Assessments will identify linkages/benefits/trade-offs, among sectors, quantifying them and assessing the trends (using modelling tools) under different developmental scenarios as means to identify optimal use of natural resources for (i) sustained growth (ii) protecting the Mediterranean LME. A highly participatory approach will be used.</li> <li>(v) Development of bankable projects that respond to priority interventions addressing pressing issues identified through the Nexus Assessments and related multi-stakeholders processes.</li> </ul>
<b><u>Expected outcome:</u></b>	<p>Balancing of competing water uses improved through water, food, energy and ecosystems integrated governance through:</p> <ul style="list-style-type: none"> <li>• Enhanced water, food, energy and ecosystems integrated governance, security and sharing of benefits;</li> <li>• Reduced trade-offs among sectors and more balanced competent water uses.</li> <li>• Sustainability of basin/aquifers and coastal and marine zones as well as supported economic activities and biodiversity</li> </ul>
<b><u>Indicators:</u></b>	<ul style="list-style-type: none"> <li>• Number of priority coastal areas that develop Nexus assessments and endorse a Nexus Strategy/ Action Plan.</li> <li>• Number of transboundary basins and aquifers in which cooperation is enhanced.</li> <li>• Number of bankable projects for priority interventions and investments.</li> </ul>
<b><u>Targets:</u></b>	<ul style="list-style-type: none"> <li>• At least 3 priority coastal areas assessed through a nexus assessment.</li> <li>• At least 3 priority coastal areas have a Nexus Strategy / Action Plan.</li> <li>• At least 1 transboundary basin/aquifer with enhanced cooperation framework.</li> <li>• At least 3 fiches of projects for priority interventions and investments.</li> </ul>
<b><u>Countries:</u></b>	Regional: all GEF Countries



<b>CHILD PROJECT 3.1</b>	<b>MANAGEMENT SUPPORT AND EXPANSION OF MARINE PROTECTED AREAS IN LIBYA.</b>
<b>Implementing Agency:</b>	UNEP
<b>Leading Executing Agency:</b>	UNEP/MAP
<b>Co-Executing Partners:</b>	IUCN, WWF MedPO
<b>GEFTF Amount:</b>	BD: 1,376,147 USD
<b>Co-financing:</b>	>5,000,000 USD
<b><u>Summary Description:</u></b>	<p>This Component will address the capacity barriers that hinder the sustainability and effectiveness of the MPAs network in a country of the Southern Mediterranean (i.e. Libya). It will aim at the:</p> <ul style="list-style-type: none"> <li>(i) development of the network of MPAs (number of sites and surface) through the establishment of MPA management support mechanisms in priority MPAs, including through:</li> <li>(ii) the assessment of the legal and institutional mechanisms for MPAs;</li> <li>(iii) the collection and centralization of data on marine biodiversity and ecosystems (national platform);</li> <li>(iv) the training on MPA networks planning and management, marine key habitat mapping, and marine megafauna monitoring;</li> <li>(v) communication and awareness about MPAs and marine biodiversity and ecosystems;</li> <li>(vi) the testing and adoption of permanent solutions to strengthen the sustainability and effectiveness of the MPAs.</li> </ul> <p>In particular, the specific work in Libya will be focused on advancing Ain Al-Ghazala, El Kouf and Farwa Lagoon MPAs towards a phase of operational sufficiency by building the capacity of MPA practitioners, developing the management plan through a step-by-step participatory planning process to ensure the effective protection of ecological and socioeconomic values of the areas.</p> <p>The activities implemented under this child project will be based on the Libyan MPA Strategy which identifies 24 marine and coastal sites of conservation interest, including Ain Al-Ghazala, El Kouf and Farwa, which have been already subject to intensive ecological and socio-economic surveys during the last few years. Geo-referenced data on species and habitats of these areas already exist and will be used as a base for the proposed actions under the MedProgramme.</p> <p>The monitoring programmes related to marine habitats and megafauna aim at improving knowledge on these populations while putting in place permanent monitoring systems at national level. The information generated through this actions will be made available to management and conservation planners and will help feeding the Libyan national database on biodiversity. Linkages with possible current or future regional and national monitoring programmes (e.g. EcAp monitoring programme, UNEP/MAP IMAP, SEIS initiative, etc.), will be sought in order to avoid duplication and foster efficiency and synergies.</p>
<b><u>Expected Outcome:</u></b>	Expansion of seascapes under protection in Libya, and improved protected area management through the implementation of the Libyan Marine Protected Areas (MPA) National Strategy, mapping of marine key habitats, monitoring of marine megafauna (mammals, seabirds, turtles and cartilaginous fishes), capacity support mechanisms and adoption of permanent solutions..
<b><u>Indicators:</u></b>	<ul style="list-style-type: none"> <li>• Number of additional hectares of marine protected areas in Libya.</li> <li>• Number of additional marine protected areas in Libya having management plans.</li> <li>• Number of MPAs that developed strategies to strengthen the sustainability and effectiveness of the MPAs.</li> <li>• Number of sites covered by marine megafauna monitoring programmes.</li> <li>• Number of monitoring networks of marine key habitats.</li> <li>• Number of training sessions to Libyan nationals (reflecting gender balance) on MPA networks planning and management, marine key habitats mapping and marine megafauna monitoring.</li> </ul>
<b><u>Targets:</u></b>	<ul style="list-style-type: none"> <li>• At least 2500 additional hectares of marine areas under protection in Libya.</li> <li>• At least 1 MPA endowed with a management plan in Libya.</li> <li>• At least 1 MPA under sustainable management scheme.</li> <li>• At least 2 sites covered by marine megafauna monitoring programmes.</li> <li>• At least 2 monitoring networks for marine key habitats established.</li> <li>• At least 5 training sessions to Libyan nationals (reflecting gender balance) on MPA networks planning and management, marine key habitats mapping, and marine megafauna monitoring.</li> </ul>
<b><u>Country:</u></b>	Libya

<b>CHILD PROJECT 4.1</b>	<b>MEDITERRANEAN SEA BASIN ENVIRONMENT AND CLIMATE REGIONAL SUPPORT PROJECT.</b>
<b>Implementing Agency:</b>	UNEP
<b>Leading Executing Agency:</b>	UNEP/MAP
<b>Co-Executing Partners:</b>	
<b>GEFTF Amount:</b>	IW: 2,000,000 USD – CW: 500,000 USD (POPs: 250,000 USD; and Mercury: 250,000)
<b>Co-financing:</b>	5,000,000 USD
<b><u>Summary Description:</u></b>	<p>This regional project will complement all child projects under the MedProgramme, maximize the effectiveness of the overall Programme and provide opportunities for south-south learning, foster intergovernmental cooperation, use M&amp;E tools and geospatial services, apply best practices and develop portfolio-wide training and communication strategies. It will in particular:</p> <ul style="list-style-type: none"> <li>(i) Ensure the effective coordination and learning among all Child Projects through annual stocktaking meetings and other communication/dissemination means.</li> <li>(ii) Monitor and disseminate throughout the region and beyond, the Programme's progress towards impacts in climate resilience, land based pollution reduction, and coastal resources sustainability, gender equality and woman empowerment.</li> <li>(iii) Raise regional awareness on the Programme and its objectives and accomplishments through the use of effective and modern communication tools.</li> </ul>
<b><u>Expected Outcomes:</u></b>	<ul style="list-style-type: none"> <li>• The increased uptake of lessons and of cutting-edge knowledge generated across the portfolio of interventions, and the active participation to IW LEARN activities, Communities of Practice, and events, improve the capacity of key regional stakeholders, and of the global IW community to build climate resilience, maintain coastal resources, protect biodiversity, and restore coastal ecosystems.</li> <li>• The effective coordination and learning among all Child Projects, consistency with the Programme objectives, and synergies among projects and partners, ensured..</li> </ul>
<b><u>Indicators:</u></b>	<ul style="list-style-type: none"> <li>• Number of experience notes and scientific publications documenting the knowledge generated across the portfolio of interventions.</li> <li>• Number of awareness raising communication tools at regional and global levels on the objectives, progress and accomplishments of the Programme.</li> <li>• Programme monitoring system successfully developed and periodically reporting (every six months) on the progress of the Programme as a whole, and of child projects.</li> </ul>
<b><u>Targets:</u></b>	<ul style="list-style-type: none"> <li>• At least 10 experience notes and peer reviewed scientific publications documenting the knowledge generated across the portfolio of interventions.</li> <li>• At least 5 awareness-raising tools aimed at the regional and global audiences produced.</li> <li>• Periodic reports (every six months) on the progress of the Programme as a whole, and of all child projects.</li> </ul>
<b><u>Country(ies):</u></b>	Regional: all GEF Countries